



Texas Primary Care Office Needs Assessment

**As Required by the
Health Resources and Services
Administration**



TEXAS
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1. Overview

Texas Primary Care Office

The purpose of the Texas Primary Care Office (PCO) Needs Assessment is to identify communities with the greatest unmet health care needs, disparities, and health workforce shortages across Texas, and identify key barriers to health care access for Texas communities in terms of preventative and primary care. The principal focus of the needs assessment is upon primary health care, mental health care, and dental health care.

The Texas PCO Needs Assessment is organized into seven sections beginning with a brief overview that discusses the background and objectives of this report. The second section primarily examines demographic and socioeconomic characteristics of the Texas population. The third section examines health indicators of the Texas population, including factors such as infant mortality, obesity, and smoking. The fourth section reviews federal health professional shortage area (HPSA), medically underserved area (MUA), and medically underserved population (MUP) designations in Texas. The fifth section discusses issues surrounding rural health, including health outcomes, health disparities, and demographic differences. The sixth section presents summarized statewide and regional results from supply and demand projections for primary care physicians, all dentists, general dentists, dental hygienists, and psychiatrists. The seventh section reviews programs and resources in Texas relevant to preventative and primary care access and improvement, and primary care educational opportunities and advanced medical training programs available within the state.

In Texas, the need for improved access in the state can be demonstrated by the 257 primary care HPSAs, 149 dental HPSAs, and 251 mental health HPSAs identified by the Health Resources and Services Administration as of November 2020. Additionally, as of November 2020, there were 179 MUAs and 19 MUPs in Texas. The percentage of uninsured Texans was 19 percent in 2020, meaning Texas still had the highest uninsured population in the nation.¹

The Health Resources and Services Administration Cooperative Agreement supports Texas PCO activities that improve access to comprehensive quality health care

services in Texas. The National Health Service Corps (NHSC) and several state programs address the maldistribution of health professionals. The state supports this effort with state and privately funded loan repayment programs, as well as the Texas Conrad 30 J-1 Visa Waiver program. Work in recruiting and retaining health professionals is led by the Texas PCO and coordinated among several Texas agencies. Also partnering in this effort are the Texas Association of Community Health Centers, the State Office of Rural Health, and the Area Health Education Centers. Other partners include, but are not limited to, certified rural health clinics (RHCs), federally qualified health centers (FQHCs), state hospitals, state supported living centers, the Texas Higher Education Coordinating Board, the Texas Medical Board, and multiple professional associations. These partnerships have improved access to health care, reduced disparities, and developed and distributed members of the health workforce to serve the underserved. As of November 2020, Texas had just over 1,000 health professionals providing obligated service through the NHSC, Nurse Corps, state and regional loan repayment programs, or the Conrad 30 J-1 Visa Waiver program.

The major program activities of the Texas PCO work together to improve access to health care services. These activities include shortage designation coordination and oversight, recruitment and retention, and administration of the Texas Conrad 30 J-1 Visa Waiver program.

Objectives of Needs Assessment

This statewide needs assessment outlines the mission of the Texas PCO to improve the health of Texans who live in underserved areas by working to increase access to primary care providers of medical, dental, and mental health services. In addition, it describes the role that the Texas PCO has in measuring access to care, assisting with retention, recruiting, and loan repayment activities, and administering the Texas Conrad 30 J-1 Visa Waiver program. This report provides a snapshot of Texas demographics, health status and risk indicators, health care shortages, and medical, dental, and mental health care access issues. The report also helps to identify priority geographic areas and populations for the Texas Department of State Health Services to focus efforts on access to health care.

2. Texas Population

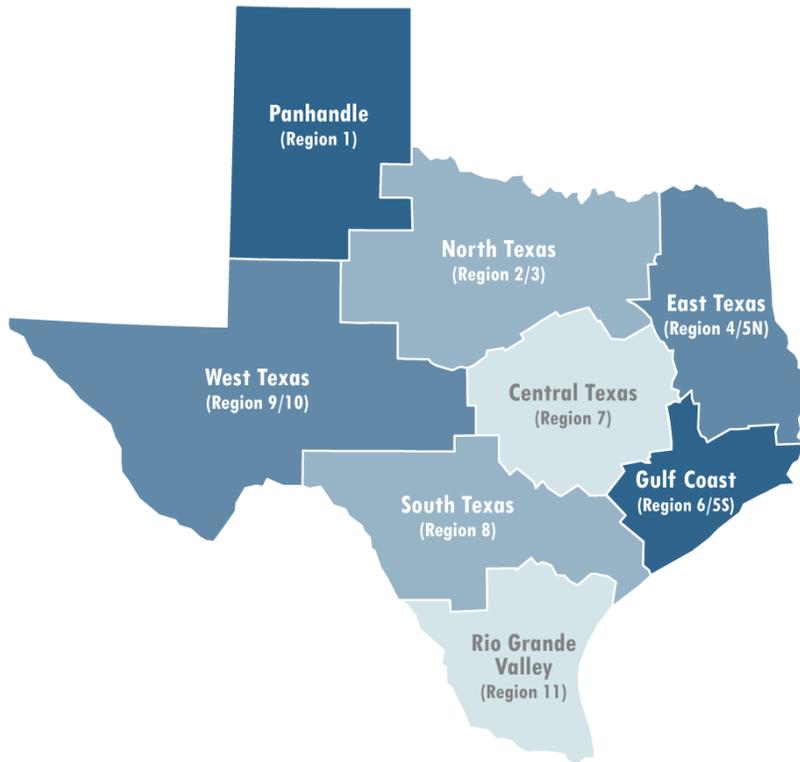
Texas is a vast state, with regional differences in geography, population size, demographic characteristics, and socioeconomic characteristics. This section provides a brief overview of these variations and relates them to the challenges that exist for accessing health care services in Texas.

Texas is the second largest state in the United States in terms of land (behind Alaska), covering an area of approximately 261,232 square miles and accounting for 7.4 percent of the total land area nationwide.^{2,3} There are 254 counties in Texas, with 172 counties classified as rural and 82 counties classified as urban.⁴ Based on population estimates, 89.3 percent of the Texas population resided in urban counties as of January 2019.⁵ The four largest metropolitan areas in Texas are located around the cities of Dallas and Fort Worth, Houston, San Antonio, and Austin, and these areas encompass multiple counties.⁶ Given the immense size of Texas, the distance that some individuals, especially those living in rural counties, must travel to receive health care services can be a significant challenge to accessing and receiving these services.

Additionally, Texas is the second largest state in the United States in terms of population (behind California), with an estimated population of over 28.9 million as of July 2019.⁷ Texas is among the states with the highest percentage increase in population growth since April 2010.⁸ The population of Texas increased an estimated 15.3 percent between April 2010 and July 2019. As of January 2019, more than half of Texans resided in the North Texas (29.2 percent) and Gulf Coast (26.4 percent) regions of the state.⁵ According to the Texas Demographic Center, the population of Texas is projected to exceed 37 million by 2035 and 47 million by 2050.⁹

The map below of Texas' eight public health regions includes the regional names used in this report. To determine which region each Texas county is located, see the following webpage on the Texas Department of State Health Services website: https://www.dshs.texas.gov/chs/info/info_txco.shtm.

Figure 1. Map of Texas Regions



Source: Texas Department of State Health Services.

Demographic Characteristics

Across the state of Texas, regional variations exist in age, gender, race/ethnicity, nativity of residents, and language spoken at home. These differences in racial/ethnic composition, along with the high percentage of foreign-born residents, present certain cultural challenges when it comes to accessing health care services in Texas.

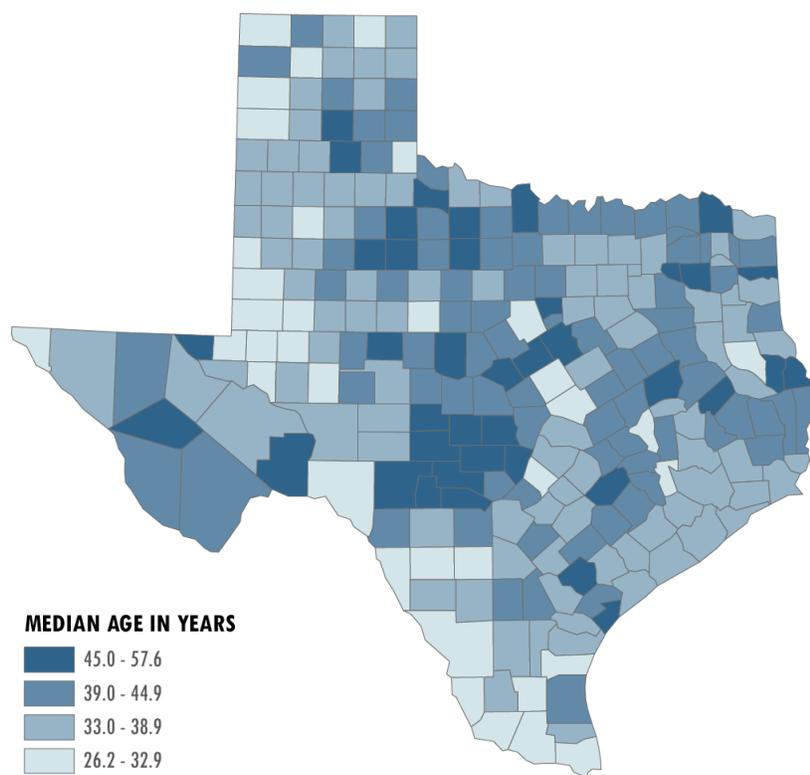
Age and Gender

Texas had a younger median age (34.4 years) compared to the nation (37.9 years) from 2014 to 2018.¹⁰ Texas also had the third youngest population among the 50 states (behind Alaska and Utah). Over a quarter of the Texas population (26.2 percent) was under 18 years of age, with 7.2 percent being under five years of age. Almost three-quarters of the Texas population (73.8 percent) was 18 years of age and over, with 12.0 percent being 65 years of age and over.

The median age of the population in Texas differed by county.¹⁰ For instance:

- Llano County in the Central Texas region had the oldest median age (57.6 years), followed by Loving County in the West Texas region (55.4 years) and Real County in the South Texas region (55.0 years).
- Brazos County in the Central Texas region had the youngest median age (26.2 years), followed by Gaines County in the West Texas region (27.9 years) and Kleberg County in the Rio Grande Valley region (28.0 years).

Figure 2. Median Age by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

From 2014 to 2018, 50.3 percent of the Texas population was female and 49.7 percent was male.¹⁰ Among adults aged 18 years and over, 50.8 percent were female and 49.2 percent were male. Moreover, among adults aged 65 years and over, 55.5 percent were female and 44.5 percent were male.

The gender distribution of the population in Texas differed by county.¹⁰ For instance:

- Real County in the South Texas region had the highest percentage of the population that was female (57.9 percent) and the lowest percentage that was male (42.1 percent).
- Concho County in the West Texas region had the highest percentage of the population that was male (66.2 percent) and the lowest percentage that was female (33.8 percent).

The age and gender distribution of the population in Texas differed by county.¹⁰ For instance:

- Among adults aged 18 years and over, Real County in the South Texas region had the highest percentage that were female (58.6 percent) and the lowest percentage that were male (41.4 percent).
- Garza County in the Panhandle region had the highest percentage of adults aged 18 years and over that were male (66.9 percent) and the lowest percentage that were female (33.1 percent).
- Among adults aged 65 years and over, Kenedy County in the Rio Grande Valley region had the highest percentage that were female (74.3 percent) and the lowest percentage that were male (25.7 percent).
- Loving County in the West Texas region had the highest percentage of adults aged 65 years and over that were male (60.0 percent) and the lowest percentage that were female (40.0 percent).

Race/Ethnicity

In 2018, the racial/ethnic composition of the Texas population was estimated to be 41.8 percent white, 39.3 percent Hispanic, 11.8 percent black, 4.8 percent Asian, and 2.2 percent from other races/ethnicities.¹¹ When examining the racial/ethnic composition of the Texas population by age, the percentage of the Texas population that was white increased as age increased, whereas the percentage of the Texas population that was Hispanic decreased as age increased.

The racial/ethnic composition of the population in Texas differed by county.¹¹ For instance:

- Clay County in the North Texas region had the highest percentage of the population that was white (91.1 percent), followed by Armstrong County (90.7 percent) and Roberts County (90.6 percent) in the Panhandle region.
- Starr County in the Rio Grande Valley region had the highest percentage of the population that was Hispanic (95.4 percent), followed by Maverick County in the South Texas region (95.2 percent) and Webb County in the Rio Grande Valley region (95.1 percent).
- Jefferson County in the Gulf Coast region had the highest percentage of the population that was black (33.1 percent), followed by Houston County (24.5 percent) and Bowie County (24.4 percent) in the East Texas region.
- Fort Bend County in the Gulf Coast region had the highest percentage of the population that was Asian (20.1 percent), followed by Collin County in the North Texas region (14.3 percent) and Moore County in the Panhandle region (9.6 percent).

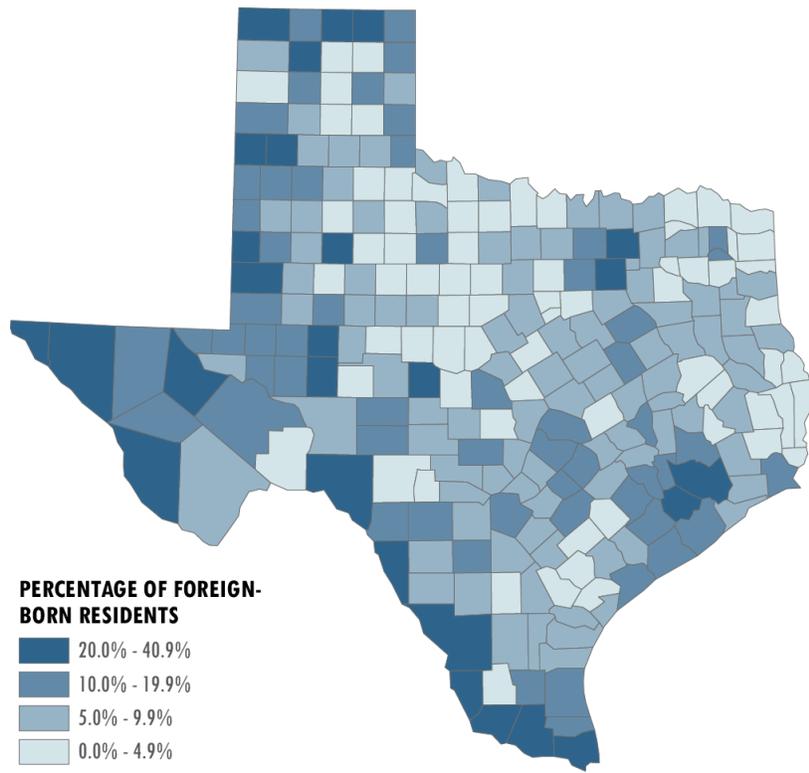
Foreign Born

From 2014 to 2018, Texas had a higher percentage of foreign-born residents (17.0 percent) compared to the nation (13.5 percent).¹² Moreover, Texas ranked seventh among the states with the highest percentage of foreign-born residents. The majority of foreign-born residents in Texas (63.3 percent) were not citizens of the United States. Most foreign-born residents in Texas were born in Latin America (68.1 percent), followed by Asia (21.6 percent) and Africa (4.8 percent).

The nativity of residents in Texas differed by county.¹² For instance:

- Presidio County in the West Texas region had the highest percentage of foreign-born residents (40.9 percent), followed by Hudspeth County in the West Texas region (36.8 percent) and Garza County in the Panhandle region (35.2 percent).
- Motley County in the Panhandle region had the lowest percentage of foreign-born residents (0.0 percent), followed by Throckmorton County (0.4 percent) and Stonewall County (0.6 percent) in the North Texas region.

Figure 3. Percentage of Foreign-Born Residents by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

Language

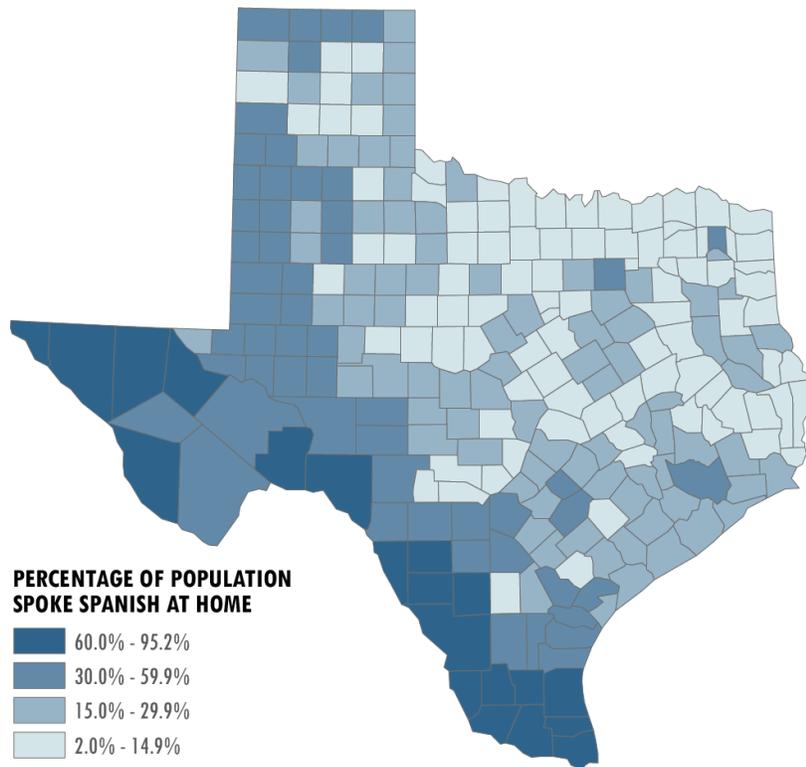
Texas had a higher percentage of individuals five years of age and over who spoke a language other than English at home (35.5 percent) compared to the nation (21.5 percent) from 2014 to 2018.¹² Among the states, Texas had the second highest percentage of individuals five years of age and over who spoke a language other than English at home (behind California). The most common language other than English spoken at home in Texas was Spanish (29.5 percent), followed by Asian and Pacific Islander languages (2.9 percent) and other Indo-European languages (2.2 percent).

Speaking Spanish at home in Texas differed by county.¹² For instance:

- Starr County in the Rio Grande Valley region had the highest percentage of individuals five years of age and over who spoke Spanish at home (95.2 percent), followed by Maverick County in the South Texas region (91.8 percent) and Zapata County in the Rio Grande Valley region (90.0 percent).

- Newton County in the East Texas region had the lowest percentage of individuals five years of age and over who spoke Spanish at home (2.0 percent), followed by Baylor County in the North Texas region (2.3 percent) and Marion County in the East Texas region (3.2 percent).

Figure 4. Percentage of Population Who Spoke Spanish at Home by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

Socioeconomic Characteristics

Socioeconomic characteristics such as household income, rate of poverty, level of education, rate of unemployment, and health insurance status present added challenges for meeting the health needs of Texans. The high percentage of Texans who lack health insurance, coupled with the high poverty rate and lower educational attainment in the state, makes health care services in Texas more difficult to obtain.

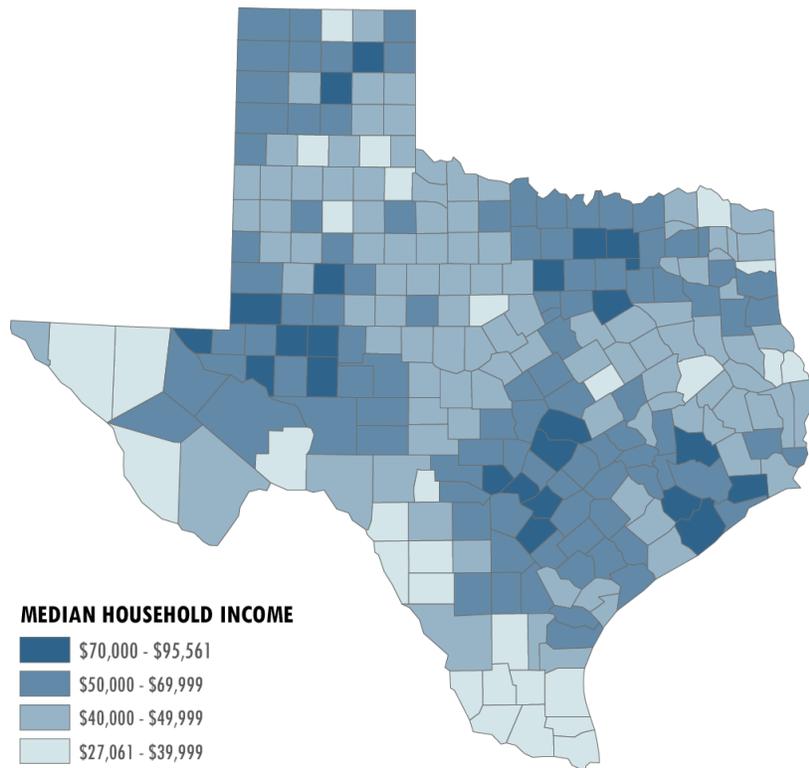
Income and Poverty

Texas had a slightly lower median household income (\$59,570) compared to the nation (\$60,293) from 2014 to 2018.¹³ Texas ranked 21st among the states with the highest median household income. Among householders between 25 and 44 years of age, Texas had a lower median household income (\$63,253) compared to the nation (\$65,893). Texas also had a lower median household income among householders between 45 and 64 years of age (\$71,455) compared to the nation (\$72,912). Texas and the nation had similar median household incomes for householders between 15 and 24 years of age and householders 65 years of age and over.

The median household income in Texas differed by county.¹³ For instance:

- Fort Bend County in the Gulf Coast region had the highest median household income (\$95,561), followed by Rockwall County (\$94,767) and Collin County (\$94,192) in the North Texas region.
- Presidio County in the West Texas region had the lowest median household income (\$27,061), followed by Brooks County in the Rio Grande Valley region (\$27,378) and Dimmit County in the South Texas region (\$27,832).

Figure 5. Median Household Income by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

From 2014 to 2018, Texas had a higher percentage of the population living below the federal poverty level (15.5 percent) compared to the nation (14.1 percent).¹⁴ When comparing poverty rates between states, Texas ranked 13th among the states with the highest percentage of the population living below the federal poverty level. Among individuals under 18 years of age, Texas had a higher percentage of the population living below the federal poverty level (22.0 percent) compared to the nation (19.5 percent). Likewise, Texas had a higher percentage of adults 65 years of age and over living below the federal poverty level (10.7 percent) compared to the nation (9.3 percent). Texas and the nation had similar rates of living below the federal poverty level for adults between 18 and 64 years of age, 13.5 percent and 13.2 percent, respectively.

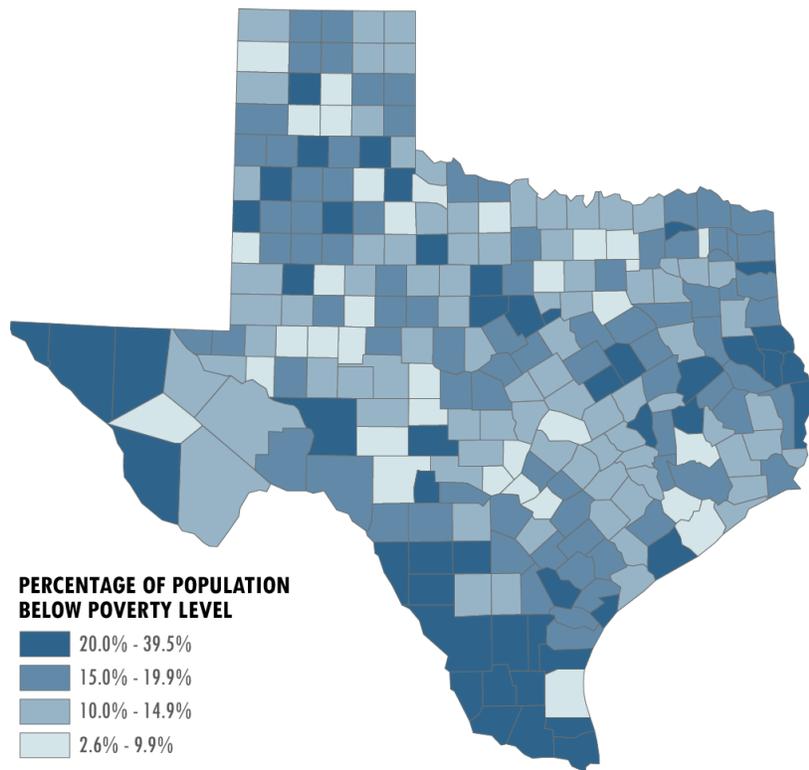
The poverty rate in Texas differed by county.¹⁴ For instance:

- Zapata County in the Rio Grande Valley region had the highest percentage of the population living below the federal poverty level (39.5 percent), followed

by Brooks County (38.9 percent) and Starr County (35.3 percent) in the Rio Grande Valley region.

- Borden County in the West Texas region had the lowest percentage of the population living below the federal poverty level (2.6 percent), followed by Sterling County in the West Texas region (3.5 percent) and Kendall County in the South Texas region (5.3 percent).

Figure 6. Percentage of Population Living Below Federal Poverty Level by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

Education

Texas had a higher percentage of adults 25 years of age and over with less than a high school education (16.8 percent) compared to the nation (12.3 percent) from 2014 to 2018.¹² Among the states, Texas had the second highest percentage of adults 25 years of age and over with less than a high school education (behind California). In addition, Texas had a lower percentage of adults 25 years of age and over with a high school diploma or equivalent as their highest level of educational

attainment (25.0 percent) compared to the nation (27.1 percent). Texas also had a lower percentage of adults 25 years of age and over with a bachelor's degree or higher (29.3 percent) compared to the nation (31.5 percent).

The educational attainment of the population in Texas differed by county.¹² For instance:

- Kenedy County in the Rio Grande Valley region had the highest percentage of adults 25 years of age and over with less than a high school education (66.3 percent), followed by Starr County in the Rio Grande Valley region (48.5 percent) and Presidio County in the West Texas region (47.6 percent).
- Collin County in the North Texas region had the lowest percentage of adults 25 years of age and over with less than a high school education (6.3 percent), followed by Carson County in the Panhandle region (6.4 percent) and Williamson County in the Central Texas region (6.8 percent).
- Collin County in the North Texas region had the highest percentage of adults 25 years of age and over with a bachelor's degree or higher (51.7 percent), followed by Travis County in the Central Texas region (48.6 percent) and Fort Bend County in the Gulf Coast region (46.1 percent).
- Loving County in the West Texas region had the lowest percentage of adults 25 years of age and over with a bachelor's degree or higher (0.0 percent), followed by Kenedy County in the Rio Grande Valley region (6.8 percent) and Hudspeth County in the West Texas region (6.9 percent).

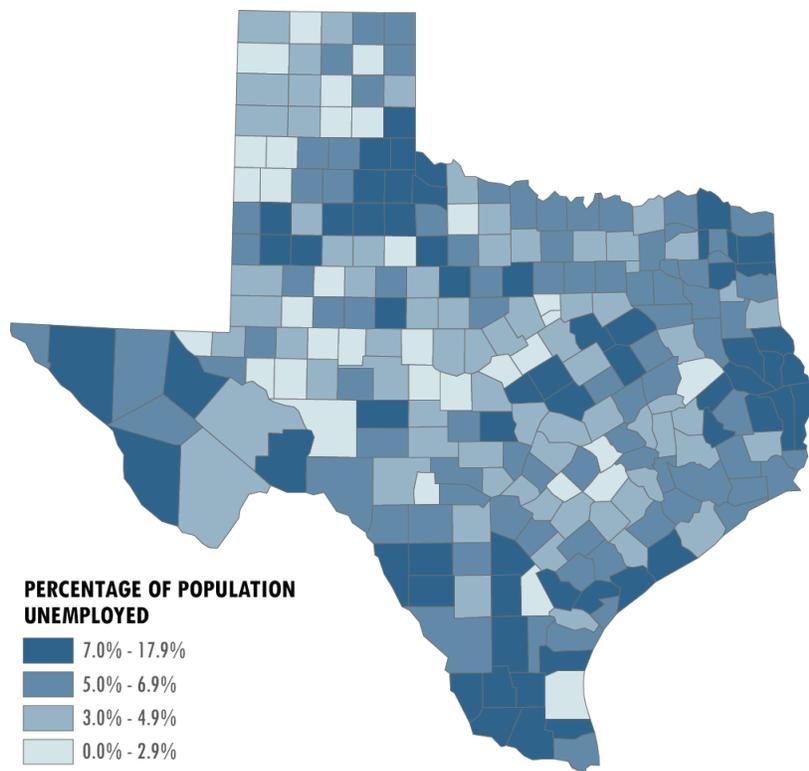
Unemployment

From 2014 to 2018, Texas and the nation had similar rates of unemployment for individuals 16 years of age and over, 5.4 percent and 5.9 percent, respectively.¹⁵ Among adults between 25 and 64 years of age with less than a high school education, Texas had a lower unemployment rate (6.0 percent) compared to the nation (9.0 percent). Likewise, Texas had a lower unemployment rate among adults between 25 and 64 years of age with a high school diploma or equivalent as their highest level of educational attainment (5.4 percent) compared to the nation (6.3 percent). As was seen nationwide, the Texas unemployment rate decreased as education level increased. The unemployment rate for both Texas and the nation was 2.8 percent among adults between 25 and 64 years of age with a bachelor's degree or higher.

The unemployment rate in Texas differed by county.¹⁵ For instance:

- McMullen County in the Rio Grande Valley region had the highest unemployment rate for individuals 16 years of age and over (17.9 percent), followed by Dimmit County in the South Texas region (16.4 percent) and Dickens County in the Panhandle region (15.5 percent).
- Crockett County, Glasscock County, and Loving County in the West Texas region and Kenedy County in the Rio Grande Valley region had the lowest unemployment rates for individuals 16 years of age and over (0.0 percent).

Figure 7. Percentage of Population Unemployed by County, Texas, 2014-2018



Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

Uninsured

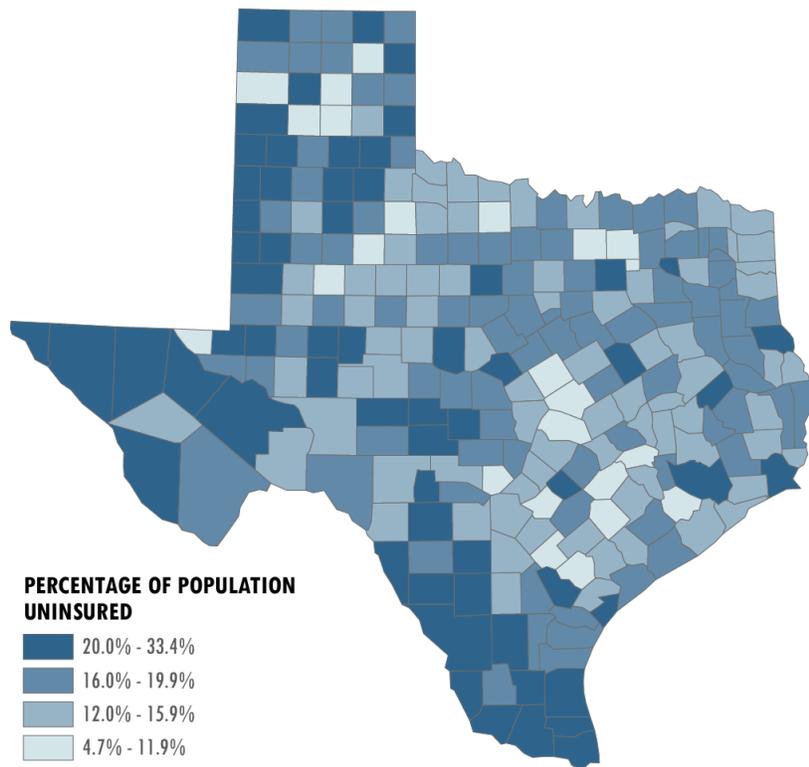
Texas had a higher percentage of the civilian noninstitutionalized population without health insurance (17.4 percent) compared to the nation (9.4 percent) from 2014 to 2018.¹⁶ Moreover, Texas had the highest uninsured rate among the states. Among individuals under 19 years of age, Texas had a higher uninsured rate (10.6 percent) compared to the nation (5.2 percent). Texas also had a higher uninsured rate

among adults between 19 and 64 years of age (23.6 percent) compared to the nation (13.2 percent). The uninsured rates for adults 65 years of age and older in Texas and the nation were the most similar when compared to the age groups listed above, 1.9 percent and 0.8 percent, respectively.

The uninsured rate in Texas differed by county.¹⁶ For instance:

- Starr County in the Rio Grande Valley region had the highest percentage of the civilian noninstitutionalized population without health insurance (33.4 percent), followed by Gaines County (31.7 percent) and Menard County (31.4 percent) in the West Texas region.
- Borden County in the West Texas region had the lowest percentage of the civilian noninstitutionalized population without health insurance (4.7 percent), followed by Kent County in the North Texas region (5.5 percent) and Armstrong County in the Panhandle region (7.6 percent).

Figure 8. Percentage of Population Uninsured by County, Texas, 2014-2018



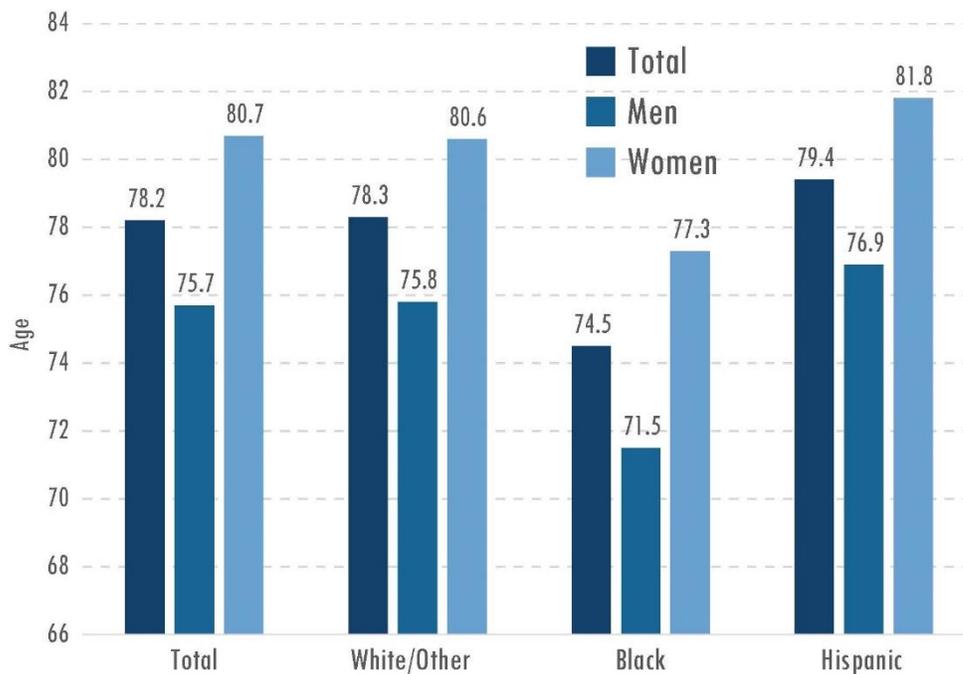
Source: U.S. Department of Commerce, U.S. Census Bureau, American Community Survey, 2014-2018.

3. Health Indicators

Health Status

In 2017, the life expectancy for Texas residents at birth was 78.2 years, while life expectancy for the United States population was 78.6 years.^{17,18} A male infant born in Texas in 2017 could expect to live 75.7 years, while a female infant could expect to live 80.7 years. Overall life expectancy at birth for black Texas residents (74.5 years) was lower than that for Hispanic residents (79.4 years) and white/other racial/ethnic residents (78.3 years). Within racial/ethnic groups, there were also disparities by gender, as demonstrated in the figure below.

Figure 9. Life Expectancy by Race and Gender, Texas, 2017



Source: Texas Department of State Health Services, Vital Statistics, 2017.

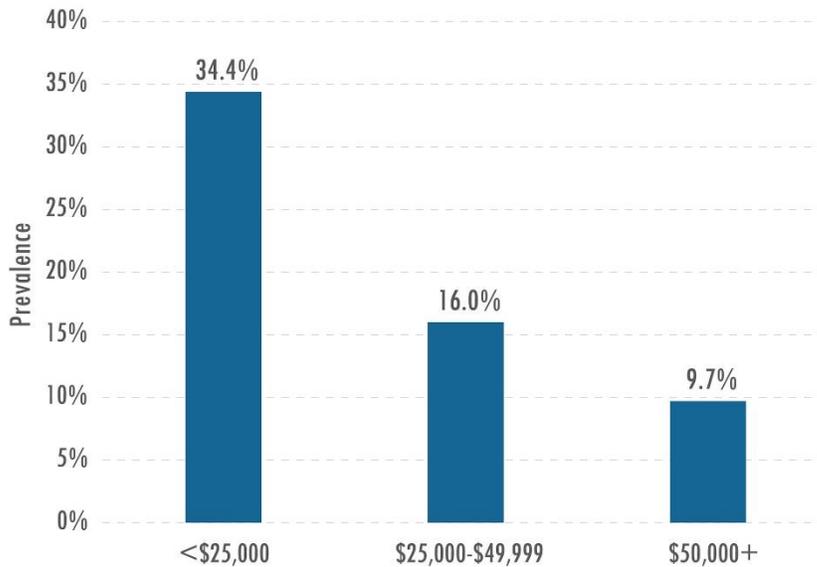
When asked to assess their own health in the Behavioral Risk Factor Surveillance System (BRFSS), 19.1 percent of Texans 18 years and over in 2018 reported that their health in general was fair or poor.¹⁹ This rate was slightly lower than that in 2017 (20.8 percent). In 2018, according to the National Survey of Children's

Health, only 2.2 percent of children aged 0 to 17 years had fair or poor health in Texas.²⁰

The 2018 BRFSS results indicate that self-reported health status for Texas adults varied by demographic and socioeconomic factors.¹⁹ A higher proportion of females (20.5 percent) reported having fair or poor health than males (17.7 percent). In terms of race/ethnicity, 22.9 percent of Hispanics reported having fair or poor health compared to 20.7 percent of blacks, 16.0 percent of other races/ethnicities, and 15.9 percent of whites.

When evaluated by income level, a higher proportion of adults with an income of less than \$25,000 reported having fair or poor health compared to those with an income of at least \$50,000 (see figure below).¹⁹ Perception of fair or poor health was also associated with education level. For example, adults without a high school diploma (39.9 percent) were more likely to report being in fair or poor health than those who had a college degree (7.5 percent).

Figure 10. Percent Reporting Health as Fair or Poor by Income, Texas, 2018



Source: Texas Department of State Health Services, Behavioral Risk Factor Surveillance System, 2018.

Infant Mortality

Infant mortality is defined as a death occurring in the first year of life.²¹ The infant mortality rate is defined as the number of infant deaths under one year of age per

1,000 live births. It is an important health outcome that is often used as a measure of the overall health of a given population. It also reflects the health status of mothers and children and serves as an indication of underlying racial/ethnic, socioeconomic, and geographic disparities.

The total number of infant deaths in Texas was 2,209 in 2017.¹⁷ The infant mortality rate in 2017 remained the same as in 2013 at 5.8 per 1,000 live births.²² Texas' infant mortality rate was at or below the national rate from 2009 to 2018.²³

Though the infant mortality rate remains low in Texas, the racial/ethnic disparity in the rate has persisted.¹⁷ Infant mortality remains a significant public health issue for black families. The infant mortality rate for black mothers (11.0) was more than two times higher than the rates for Hispanic mothers (5.4) and white mothers (4.8). For non-Hispanic mothers from other races/ethnicities, the infant mortality rate was 3.9 per 1,000 births.

Low Birth Weight

Low birth weight is an important marker for the well-being of infants and can be a predictor of infant mortality.²³ In 2017, the rate of low birth weight in Texas was 8.4 percent.¹⁷ In 2017, the leading cause of death for black infants in Texas was short gestation and low birth weight, while the leading cause of death for white infants and Hispanic infants was congenital malformation.²³ The percentage of babies born weighing less than 2,500 grams has not profoundly changed in Texas since 2009 (8.5 percent). Texas has been above the national rate and is currently not meeting the Healthy People 2020 target of 7.8 percent of live births weighing less than 2,500 grams.

As with infant mortality, black mothers in Texas had a disproportionately high percentage of infants being born with low birth weight in 2017.^{17,23} For example, 13.9 percent of infants born to black mothers had low birth weight compared with 7.9 percent of infants born to Hispanic mothers and 7.1 percent of infants born to white mothers. The low birth weight rate was also higher among mothers in the other racial/ethnic group (8.9 percent).

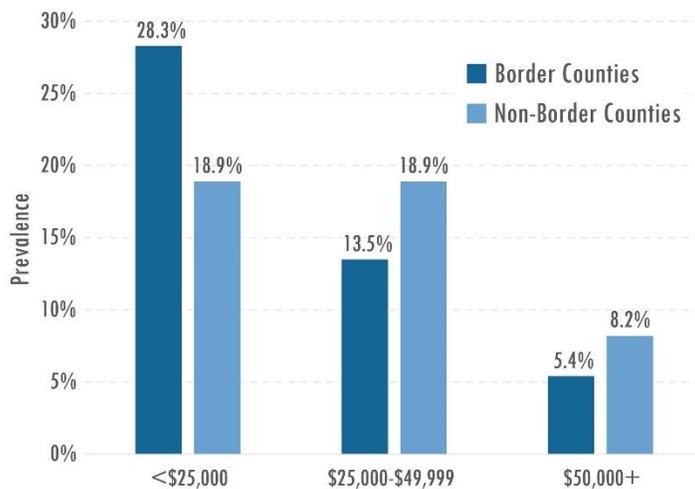
Diabetes and Hypertension

Diabetes has remained the seventh leading cause of death in Texas since 2014.²⁴ There were 5,991 deaths caused by diabetes in 2018.²⁵ According to 2018 Texas BRFSS data, 12.6 percent of adults 18 years and older reported that they had been

told by a doctor, nurse, or other health professional that they had diabetes.¹⁹ Results also indicate that 24.3 percent of adult Texans who did not earn a high school diploma reported having been diagnosed with diabetes compared to 8.0 percent of those who were college graduates. A higher proportion of adults with an income of less than \$25,000 (17.9 percent) reported having been diagnosed with diabetes than those with an income greater than or equal to \$50,000 (7.9 percent).

In terms of geography, the proportion of diagnosed diabetes among adults was higher in border counties (18.1 percent) than the rest of Texas (that is, non-border counties: 13.7 percent).¹⁹ There are 32 border counties in Texas, and these counties are within 100 kilometers of the Texas-Mexico border. Overall, income disparities for those with diagnosed diabetes making less than \$25,000 were more substantial in border counties than in non-border counties, as demonstrated in the figure below.

Figure 11. Percent Reporting Diagnosed Diabetes by Income and County, Texas, 2018

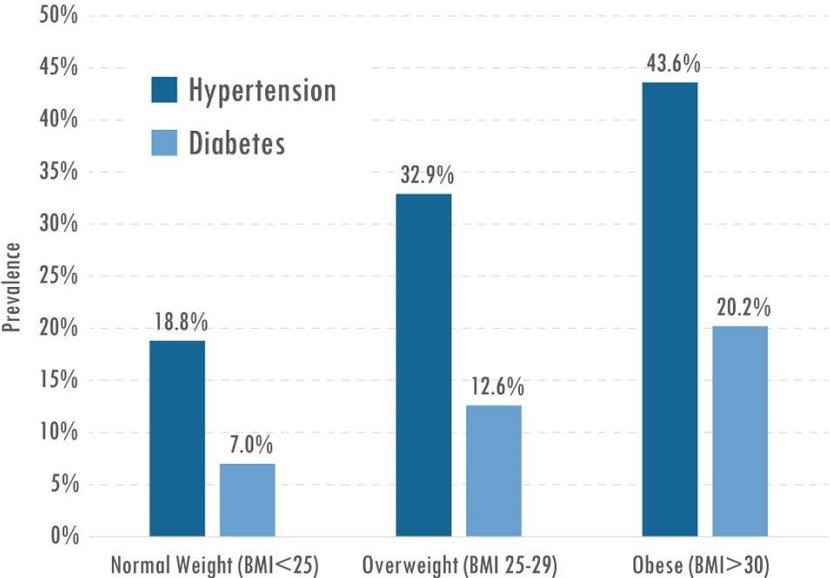


Source: Texas Department of State Health Services, Behavioral Risk Factor Surveillance System, 2018.

According to 2018 Texas BRFSS data, about one-third (34.5 percent) of adults 18 years and over reported that they had been told by a doctor, nurse, or other health professional that they had high blood pressure.¹⁹ The prevalence of diagnosed hypertension was 37.8 percent among males compared to 31.6 percent among females. Black adults (46.9 percent) had the highest proportion of diagnosed hypertension, followed by white adults (41.7 percent), adults from other races/ethnicities (28.7 percent), and Hispanic adults (23.3 percent).

Additionally, obesity is related to the prevalence of diagnosed hypertension (see figure below).²⁶ The BRFSS has a body mass index (BMI) value that was calculated from self-reported height and weight information in order to measure obesity and overweight. In 2018, 43.6 percent of adult Texans who were obese (BMI>30) had been diagnosed with hypertension compared to 32.9 percent of adults who were overweight but not obese (BMI 25-29) and 18.8 percent of adults who were in the normal weight range (BMI<25). The figure below also shows a similar increasing relationship between BMI value and the prevalence of diagnosed diabetes; a higher proportion of overweight or obese adults reported having diagnosed diabetes than adults in the normal weight range.

Figure 12. Prevalence of Hypertension and Diabetes by BMI Category, Texas, 2018



Source: Texas Department of State Health Services, Behavioral Risk Factor Surveillance System, 2018.

Obesity

Obesity is recognized as a risk factor for not only hypertension and type two diabetes but also coronary heart disease, certain types of cancer, sleep apnea and breathing problems, and gallbladder disease.²⁷ BMI is a practical measure of an individual’s weight in relation to height.²⁸ The terms ‘overweight’ and ‘obese’ refer to body weight that is greater than what is considered healthy for a certain height.

According to 2018 BRFSS data, 69.5 percent of Texas adults aged 18 years and older were classified as overweight or obese.¹⁹ In 2018, 34.8 percent of adults were classified as overweight (BMI 25-29) and 34.8 percent were classified as obese (BMI>30).^{19,27} The BRFSS results indicate that there were differences in the prevalence of obesity among different gender and racial/ethnic groups. Black females (47.5 percent) had the highest proportion classified as obese, followed by Hispanic females (40.5 percent), white females (30.1 percent), and females from other races/ethnicities (18.4 percent).²⁶ In contrast, Hispanic males (39.8 percent) had the highest proportion classified as obese, followed by white males (31.7 percent), black males (26.5 percent), and males from other races/ethnicities (14.8 percent). Among females, results by income indicate that those with an income of less than \$25,000 (45.7 percent) had the highest proportion classified as obese, followed by those with an income between \$25,000 and \$49,999 (34.9 percent) and those with an income of at least \$50,000 (30.1 percent). Males had similar proportions of obesity across income categories; 34.6 percent of those making less than \$25,000, 30.0 percent of those making between \$25,000 and \$49,000, and 35.4 percent of those making at least \$50,000.

Childhood obesity is also a serious problem in the nation.¹⁰ For children and adolescents, obesity is defined as a BMI at or above the 95th percentile of the gender-specific BMI-for-age growth charts from the Centers for Disease Control and Prevention, and overweight is defined as a BMI between the 85th and 94th percentile.^{20,29} According to Youth Risk Behavior Survey (YRBS) data, 16.9 percent of Texas students in grades nine through 12 were obese in 2019.³⁰ Male students (20.6 percent) were more likely to be obese than female students (13.0 percent).

The 2018 National Survey of Children's Health results indicate that 15.0 percent of children aged 10 to 17 years in Texas were obese, and an additional 18.1 percent were overweight.²⁰ By age group, 18.8 percent of children aged 10 to 13 years were obese compared to 9.9 percent of children aged 14 to 17 years.

Smoking

Tobacco use increases the risk of several types of cancer, including cancers of the throat, lung, mouth, esophagus, stomach, pancreas, kidney, bladder, and cervix, and acute myeloid leukemia.³¹ Smoking increases the risk of heart disease, heart failure, and heart attack.³²

The 2018 BRFSS results indicate that 14.4 percent of Texas adults 18 years and older were current smokers.¹⁹ This rate was higher than the Healthy People 2020 target of 12.0 percent.³³ By age group, the proportion of current smokers was highest among adults between 45 and 64 years of age (18.8 percent). Males (17.5 percent) were more likely to be current smokers than females (11.4 percent).

Based on the current smoker measure in the Texas YRBS, adolescent smoking in Texas has been steadily decreasing.³⁰ The 2019 YRBS results indicate that 4.9 percent of Texas high school students smoked cigarettes on at least one day within the 30 days prior to the survey. This was a decrease from the 2013 YRBS, which was 14.1 percent. Twelfth graders (9.8 percent) were more likely than ninth graders (2.7 percent) to report current cigarette smoking in 2019.

According to a review in the New England Journal of Medicine, vaping may be less harmful than tobacco smoking, but both may cause detrimental health effects.³⁴ The amount of nicotine, flavorings, and added chemical agents vary greatly between electronic nicotine delivery systems, and this product diversity makes it difficult to evaluate the health effects of electronic nicotine delivery systems. While electronic nicotine delivery system products have been advertised as a means to quit traditional smoking, there are no devices approved by the Food and Drug Administration for this purpose.³⁵

The 2017 results from the Texas YRBS indicate that 41.2 percent of high school students reported having ever used an electronic vapor product, and that rose to 48.7 percent in 2019.³⁰ In 2017, 10.3 percent of high school students surveyed reported using an electronic vapor product on at least one day within the 30 days prior to the survey. In 2019, that number rose to 18.7 percent. In 2019, white students (30.9 percent) were more likely to report using an electronic vapor product on at least one day within the 30 days prior to the survey than Hispanic students (14.5 percent), students from other races/ethnicities (14.3 percent), and black students (9.8 percent). Among students who reported current electronic vapor product usage and were under 18 years of age, 15.3 percent reported usually getting their own electronic vapor products by buying them in a store or gas station during the past 30 days.

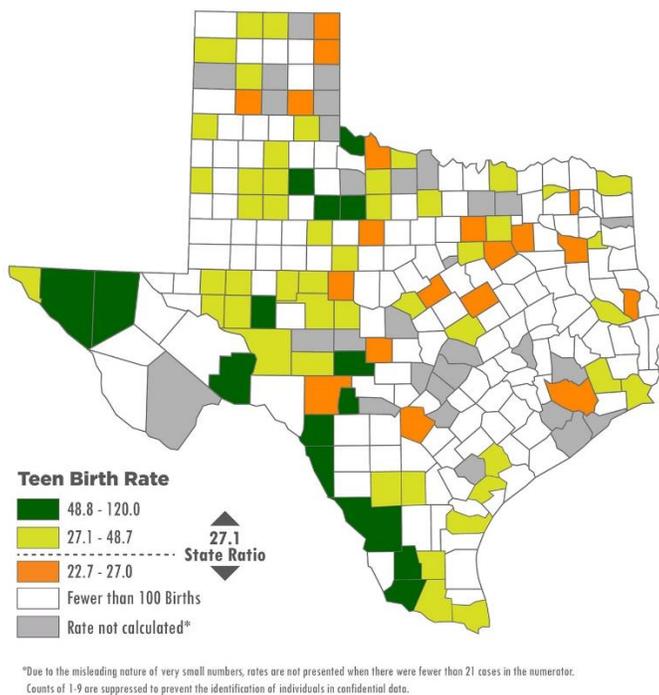
Teen Births

Teen pregnancy and childbearing have both short- and long-term adverse effects for teen parents, their children, and their community.³⁵ Children of teen mothers

face increased costs for health care, incarceration, and lost tax revenue. Teen pregnancy and childbirth are also significant contributors to drop out rates among high school girls. A study analyzing National Longitudinal Survey of Youth data (1997 cohort) found that only one-half of teen mothers received a high school diploma by 22 years of age compared to almost nine in 10 young women who did not give birth as teens.³⁶

In 2017, a total of 26,954 babies were born to females aged 15 to 19 years in Texas, yielding a live birth rate of 27.1 per 1,000 females in this age group.¹⁷ This rate was a record low for Texas since 2009 but was still substantially higher than the corresponding 2017 teen birth rate in the nation (18.8 per 1,000 females).^{17,23,35} The figure below illustrates the teen pregnancy rate by county.

Figure 13. Teen Birth Rate by County of Residence, Texas, 2017



Source: Texas Department of State Health Services, Vital Statistics, 2017.

Mammography Screening

One important preventive health service that women receive is mammography screening. Screening mammograms can be used to check for signs of breast cancer in women who have no symptoms of the disease and to find microcalcifications

(small calcium deposits in breast soft tissue) that sometimes indicate the presence of breast cancer.³⁷ Early detection of breast cancer with mammography screening implies that treatment can be started earlier in the course of the disease, possibly before it has spread. Mammography screening can help reduce the number of deaths from breast cancer among women aged 40 to 74 years, especially for those over the age of 50.³⁸

The 2018 Texas BRFSS results indicate that 31.4 percent of females aged 40 years and older reported not having a mammogram in the past two years.¹⁹ A higher proportion of females from other races/ethnicities (59.4 percent) reported not having a mammogram in the past two years compared to Hispanic females (33.7 percent), white females (29.9 percent), and black females (22.2 percent). Uninsured females (47.2 percent) were more likely to report not having a mammogram in the past two years compared to insured females (28.9 percent).

Immunizations

The influenza, or flu, vaccine protects against the influenza virus, a viral illness which causes hundreds of thousands of hospitalizations and up to tens of thousands of deaths each year.³⁹ Though the flu vaccine may not always prevent flu infection, it may reduce the severity of illness and the risk of children dying from the flu. The Centers for Disease Control and Prevention recommends annual flu vaccines to everyone six months and older. Adults 65 years and older are particularly vulnerable to the flu, accounting for up to 85 percent of flu-related deaths and over half of flu-related hospitalizations.⁴⁰ As such, it is important individuals in this age group receive the flu vaccine annually.

For the 2018-2019 flu season, Texas had comparable flu vaccination rates compared to the national average across all age groups.⁴¹ The Texas vaccination rate for all adults was 43.2 percent. However, Texas did see an increase in flu vaccination coverage from the prior flu season across all age groups, with the majority being a significant increase. Despite this increase, all age groups failed to meet the Healthy People 2020 target of 70 percent, with vaccination coverage estimates of 61.8 percent for children (six months to 17 years) and 43.2 percent for adults (18 years and older).^{41,42} Adults 65 years and older did have a much higher vaccination rate than adults 18 to 64, 67.5 percent compared to 37.7 percent.⁴¹

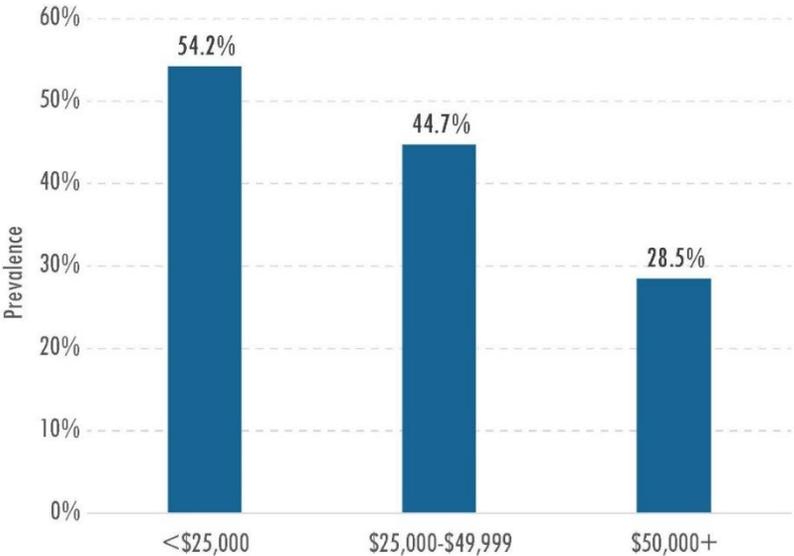
Dental Care

Oral health affects overall health and well-being throughout life.⁴³ Oral diseases and infections are associated with various health problems, including heart disease, stroke, diabetes, and negative pregnancy outcomes.

Regular dental care is essential to promote oral health and to prevent and treat tooth decay and infection. Based on 2018 BRFSS data, 60.7 percent of adults aged 18 years and over in Texas reported that they had visited a dentist or dental clinic for any reason within the past year, while 39.3 percent reported that they had not.¹⁹ This measure is only a basic indicator of dental care utilization since it does not capture any information on the type of care received, the total amount of care received, or whether a treatment plan was completed. However, it is an informative measure of whether an individual is accessing dental care or not.

A higher proportion of Hispanic adults (45.3 percent) reported not visiting a dentist or dental clinic for any reason within the past year compared to black adults (39.6 percent), adults from other races/ethnicities (38.9 percent), and white adults (34.4 percent).¹⁹ Lower income adults were much more likely than those with higher income to report not visiting a dentist or dental clinic in the past year (see figure below), indicating that financial barriers may keep many from receiving timely dental care. Adults without a high school diploma (57.6 percent) were more likely to report not visiting a dentist or dental clinic in the past year compared to college graduates (24.1 percent).

Figure 14. Percent Reporting Not Visiting a Dentist or Dental Clinic in the Past Year by Income, Texas, 2018



Source: Texas Department of State Health Services, Behavioral Risk Factor Surveillance System, 2018.

In terms of geography, adults in border counties (51.6 percent) were more likely than those living in non-border counties (39.7 percent) to report not visiting a dentist or dental clinic for any reason within the past year.¹⁹ Similarly, non-metropolitan counties (54.7 percent) were more likely than metropolitan counties (39.0 percent) to report not visiting a dentist or dental clinic in the past year.

Based on data from the 2018 National Survey of Children’s Health, 85.9 percent of children aged one to 17 years in Texas had no oral health problems in the past 12 months.²⁰ According to responses from caregivers of children in this age group, 7.6 percent of Texas children had teeth that were in fair or poor condition, 17.4 percent had teeth in good condition, and 75.0 percent had teeth in excellent or very good condition. On the other hand, 26.7 percent of Texas children aged one to five years had received no preventive dental care in the past 12 months compared to 18.1 percent of children aged six to 11 years and 23.2 percent of children aged 12 to 17 years. Lack of preventive dental care varied by health insurance status. Children without current health insurance (47.8 percent) were more likely to have received no preventive dental care in the past 12 months than those with either private health insurance (19.6 percent) or public health insurance (16.2 percent).

According to data from the 2018-2019 Basic Screening Survey, 19.7 percent of Texas children in kindergarten had untreated tooth decay.⁴⁴ Additionally, 17.5 percent of third grade students in the 2017-2018 survey had untreated dental decay.⁴⁵

Mental Health

Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors.⁴⁶ Depression is not only associated with substance use and the development of hypertension, heart disease, diabetes, and stroke, but it is also a risk factor for suicide attempts.

When asked to assess their own mental health status, including stress, depression, and problems with emotions, 20.4 percent of adult Texans surveyed in the 2018 BRFSS said that their mental health was not good for five or more days during the past 30 days.¹⁹ Self-reported poor mental health for five or more days was more likely among females (22.8 percent) than males (17.9 percent). Black adults (22.4 percent) reported the highest proportion of poor mental health for five or more days, followed by white adults (21.0 percent), Hispanic adults (19.3 percent), and adults from other races/ethnicities (17.6 percent).

Results also indicate that 16.5 percent of adults in Texas had ever been diagnosed as having a depressive disorder (including depression, major depression, dysthymia, or minor depression) by a doctor, nurse, or other health professional.¹⁹ The prevalence of diagnosed depressive disorders among females (21.9 percent) was higher than the rate among males (11.0 percent). Both black and white adults reported a similar prevalence of diagnosed depressive disorders (18.3 percent and 19.3 percent, respectively); these prevalence estimates were higher than those reported for Hispanic adults (13.0 percent) and adults from other races/ethnicities (12.8 percent). In addition, 3.3 percent of adults in Texas reported having ever seriously considered attempting suicide during the past 12 months. Adults aged 18 to 29 years (7.4 percent) reported the highest proportion of having ever seriously considered attempting suicide during the past 12 months, followed by adults aged 30 to 44 years (3.9 percent) and adults 65 years and older (1.0 percent). Results by age were not available for adults between the ages of 45 and 64 years.

In Texas, suicide was the second leading cause of death for adolescents and young adults aged 15 to 24 years in 2015.⁴⁷ According to 2019 Texas YRBS data, 18.9 percent of high school students reported that they had seriously considered

attempting suicide during the past 12 months, and 10.0 percent of students reported making at least one suicide attempt during the past 12 months.³⁰ A higher proportion of female students (12.4 percent) reported making at least one suicide attempt during the past 12 months than male students (7.5 percent), and a higher proportion of black students (12.3 percent) reported such than Hispanic students (10.4 percent), white students (9.5 percent), and students from other races/ethnicities (7.0 percent).

According to the 2018 and 2019 National Surveys on Drug Use and Health from the Substance Abuse and Mental Health Services Administration, an average of 8.9 percent of adults 18 years and older had used illicit drugs in the last month compared to 7.1 percent of children aged 12 to 17 years.⁴⁸ An average of 6.5 percent of adults aged 18 years and older had substance abuse disorder, and 5.0 percent had alcohol use disorder. Of adults 18 years and older, 3.7 percent reported the misuse of pain relievers in the previous year compared to 2.9 percent of children aged 12 to 17 years. Of children aged 12 to 17 years, 7.1 percent reported illicit drug use in the past month, and 4.6 percent reported binge alcohol use.

4. Texas Designation Areas

Development of shortage designations is a constant focus and priority of the Texas PCO based upon the number of rural and underserved areas and populations existing within the state. In the PCO's mission to identify geographic areas or population groups with the greatest unmet health care needs, disparities, and health workforce shortages, shortage designations serve a critical role in the prioritization of both federal and state resources to overcome Texas' challenges in improving primary care delivery.

Health Professional Shortage Area Designations

HPSAs are federal designations identified by the U.S. Department of Health and Human Services, Health Resources and Services Administration. HPSA designations identify and indicate geographic areas or population groups with a deficit in primary care services within medical, dental, and mental health categories. HPSA designations are used as an eligibility requirement for numerous federal programs and resources available to primary care providers such as the Conrad 30 J-1 Visa Waiver program and the NHSC scholarship and loan repayment programs. It is a priority for Texas to make sure that HPSA designations are updated so that as many resources and programs as possible are available to Texas providers, and are regularly updated every four years as required. Defined primary care service areas (census tracts or counties) can receive either a geographic or population group HPSA designation.

For a service area to receive a geographic HPSA designation:

- The defined geographic service area for health service delivery must be considered rational;
- The population to provider full-time equivalency ratio in the rational service area must exceed the defined population to provider ratio (table on the following page); and
- Health care resources in contiguous areas of the rational service area must be over-utilized, or exhibit excessive distance or inaccessibility.

In instances where a defined primary care service area does not meet shortage criteria for geographic HPSA designation, a population group HPSA may be possible. For a service area to receive a population group designation, a population (i.e., low-income, migrant farm worker, etc.) within the service area must have barriers to accessing primary care. Furthermore, the population group, access barriers, and ratio of persons in the population group to the full-time equivalent (FTE) of providers serving it must be defined. Barriers to accessing primary care can include aspects such as health insurance coverage, poverty level, perceived affordability of health care, office or appointment wait times, and travel time or distance to the nearest primary care provider.

Table 1. Population to Provider Ratios for HPSA Designations

	Geographic HPSA Criterion	Geographic High Needs and Population Group HPSA Criterion
Primary Care	>= 3,500:1 physician	>= 3,000:1 physician
Dental	>= 5,000:1 dentist	>= 4,000:1 dentist
Mental Health	>= 6,000:1 core mental health provider and 20,000:1 psychiatrist*	>= 4,500:1 core mental health provider and 15,000:1 psychiatrist**

* Or a population to core mental health provider ratio >= 6,000:1 or a population to psychiatrist ratio of >=30,000:1.

** Or a population to core mental health provider ratio >= 6,000:1 or a population to psychiatrist ratio of >=20,000:1.

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Shortage Designation Management System: Manual for Policies and Procedures, September 24, 2020.

As defined by the U.S. Department of Health and Human Services, primary care and mental health designations may receive a score from 1 to 25.⁴⁹ Dental designations can receive a score ranging from 1 to 26. A higher score is synonymous with a greater shortage of providers for the geographic area or population group and represents a higher priority for available primary care programs and resources.

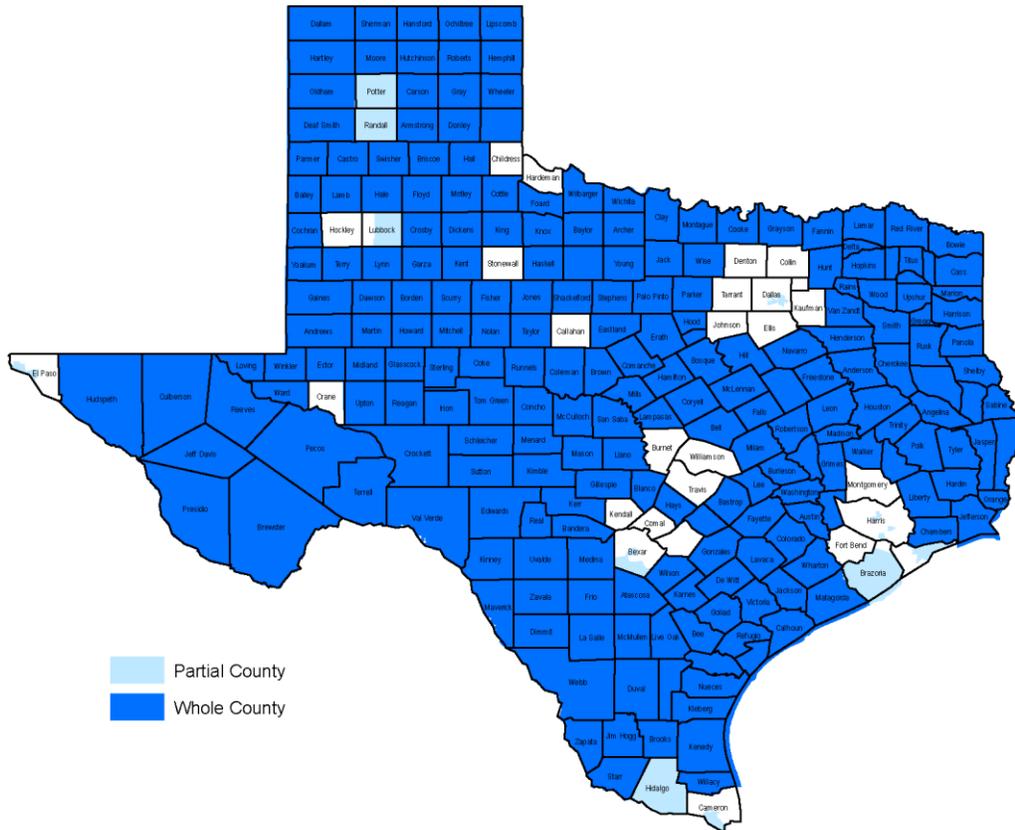
HPSAs are required to be updated once every four years and are permitted to be designated in non-concurrent years by a state PCO. As a result, designation

statistics may not accurately reflect current health workforce shortages or population health care needs which are continuously influenced by a number of dynamic socio-demographic factors that may result in sudden changes in population and demographics, and/or migration of health providers. However, HPSA scores and statistics are important to note, as they still provide the most accurate four-year time-series data available, gathered directly from health providers through data collection activities by state PCOs. According to the Health Resources and Services Administration within the U.S. Department of Health and Human Services, there were 7,226 designated primary care HPSAs, 6,492 designated dental HPSAs, and 5,766 designated mental health HPSAs across the United States as of November 2020.⁴⁹ Based upon the established population to provider ratios for each discipline, approximately 15,039 primary care physicians, 10,783 dentists, and 6,559 psychiatrists would be needed to eliminate designations nationwide as of November 2020.

Primary Care Health Professional Shortage Areas

As of November 2020, there were 257 primary care HPSAs in Texas, including 154 designations for geographic areas and 103 designations for population groups.⁵⁰ Of the state's 254 counties, 136 counties (53.5 percent) had a geographic designation and 99 counties (39.0 percent) had a population designation for primary care.

Figure 15. Primary Care HPSAs, Texas, November 2020

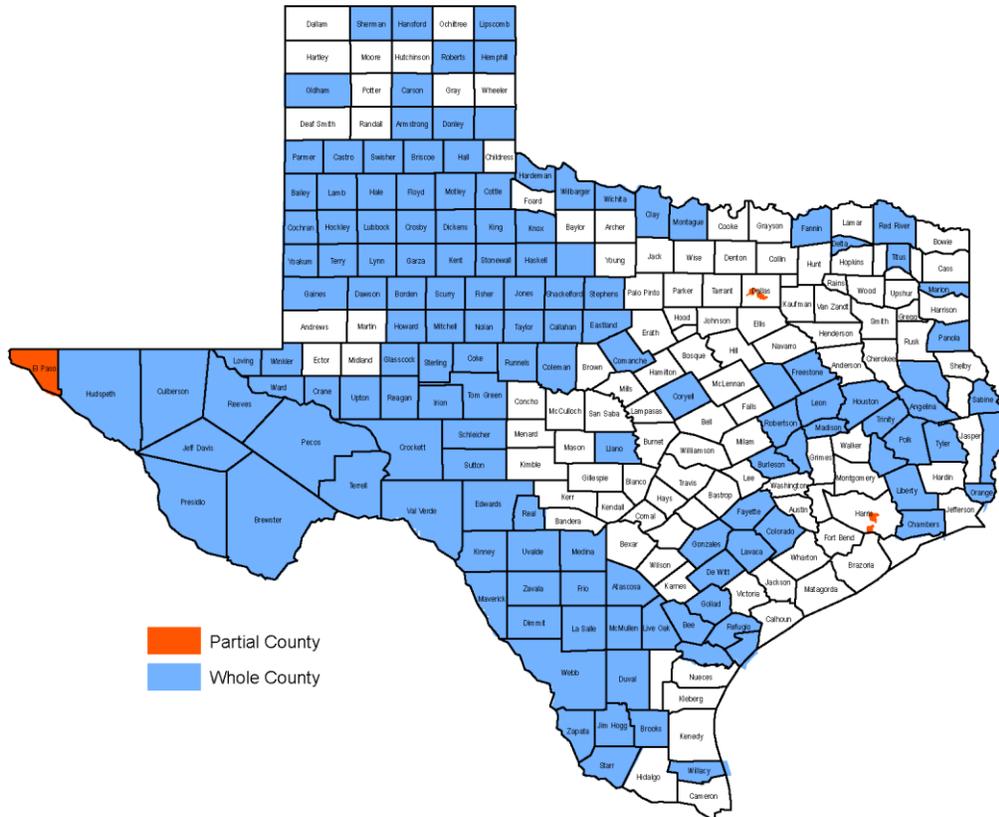


Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, November 2020.

Dental Health Professional Shortage Areas

As of November 2020, there were 149 dental HPSAs in Texas, including 114 designations for geographic areas and 35 designations for population groups.⁵⁰ Of the state’s 254 counties, 108 counties (42.5 percent) had a geographic designation and 33 counties (13.0 percent) had a population designation in the dental discipline.

Figure 16. Dental HPSAs, Texas, November 2020

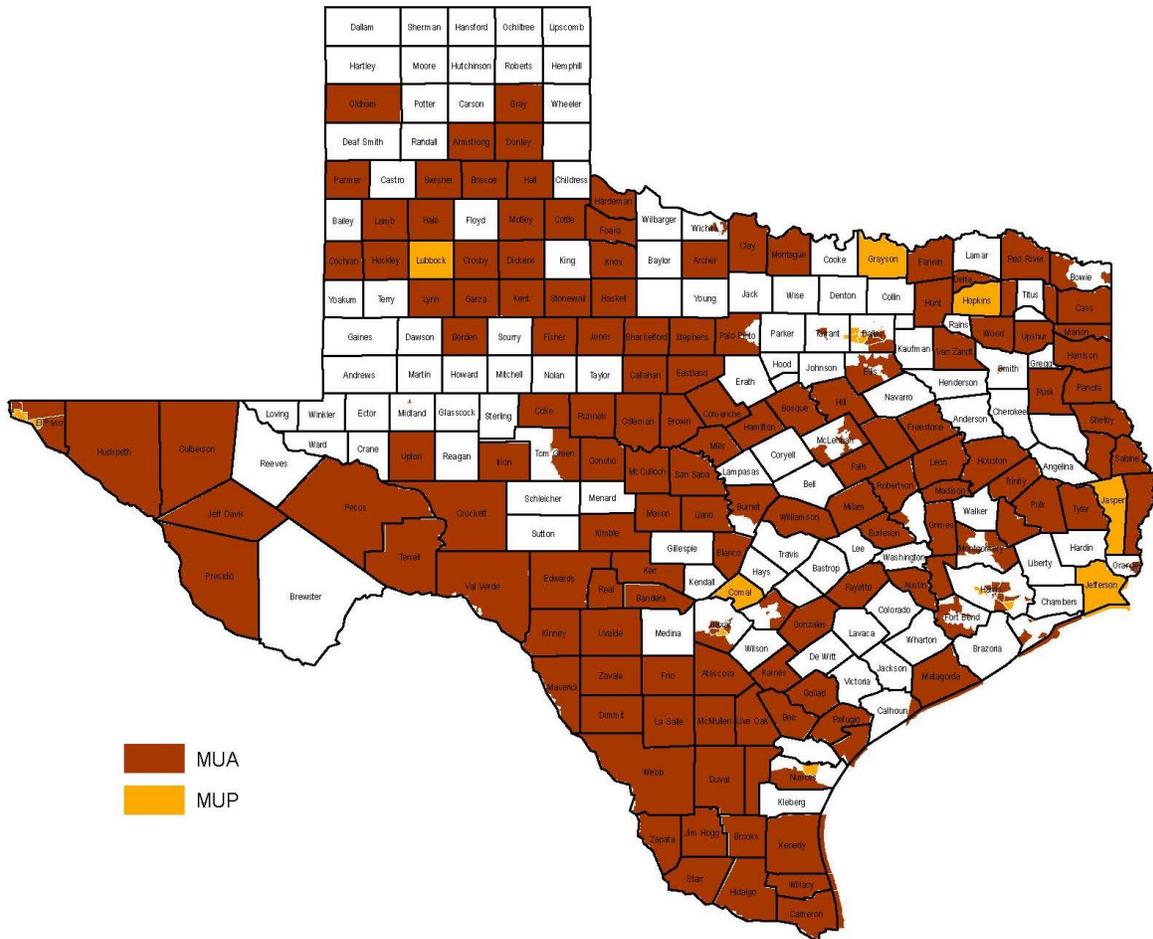


Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, November 2020.

Mental Health Care Health Professional Shortage Areas

As of November 2020, there were 251 mental health HPSAs in Texas, including 201 designations for geographic areas and 50 designations for population groups.⁵⁰ Of the state’s 254 counties, 204 counties (80.3 percent) had a geographic designation and 44 counties (17.3 percent) had a population designation for mental health.

Figure 18. MUAs and MUPs, Texas, November 2020



Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, November 2020.

Medically Underserved Areas

MUAs have a shortage of primary care physicians in geographic areas such as a⁵¹:

- Whole county;
- Group of neighboring counties;
- Group of census tracts; or

- Group of county or civil divisions.

There were 179 MUAs in Texas as of November 2020.⁵²

Medically Underserved Populations

MUPs are specific sub-groups living in a defined area with a shortage of primary care physicians.⁵¹ Some examples of these sub-groups are:

- Homeless;
- Low-income;
- Medicaid-eligible;
- Native American; and
- Migrant farmworkers.

There were 19 MUPs in Texas as of November 2020.⁵²

5. Rural Health

This section discusses the health outcomes, health disparities, and demographic differences throughout the state of Texas. Additionally, the unique challenges faced by hospitals and health practices are discussed.

Health Outcomes in Rural Areas

Nationally, residents in rural areas have a lower life expectancy than residents in urban areas.⁵³ Those in rural areas are more likely to smoke, less likely to exercise, and have less nutritional diets than those in suburban areas.⁵⁴ These factors contribute to higher mortality rates and higher rates of chronic diseases in rural areas. Rural residents are more likely to have hypertension, diabetes, arthritis, and high cholesterol than urban residents. Rural areas also have higher age-adjusted mortality for heart disease, cancer, chronic respiratory disease, and stroke.⁵⁵ Rural children are more likely to be obese than urban children.⁵⁶ In 2014, the age-adjusted, all-cause mortality was 830.5 per 100,000 population in rural communities and 703.5 in urban communities.⁵³ Rural residents were also more likely to die due to unintentional injury, drug poisoning, and suicide than urban residents.

Rural health in Texas faces both similar and unique challenges compared to rural health nationally.⁵⁷ The rural populations of Texas are incredibly diverse; the rural East Texas region is very different from the rural Rio Grande Valley region. For example, the Texas-Mexico border area is predominantly Hispanic (88.4 percent) compared with the rest of the state (35.5 percent).⁵⁸ There are colonias, which are “residential area[s] lacking some basic infrastructure like a drinking water supply, sewage treatment, paved roads, adequate drainage, etc.”⁵⁹ Adult residents of colonias report worse physical health compared to adults nationally and Hispanic adults as a whole.⁶⁰

Emergency Medical Services

Emergency medical services (EMS) face challenges in rural Texas.⁶¹ As requirements for EMS personnel increase and access to training in rural Texas decreases, this exacerbates staffing issues in rural Texas. Rural EMS providers tend to be staffed less than urban EMS. Additionally, a study found that rural EMS are more likely to lose staff to burnout than urban EMS. The closure of rural hospitals

also puts strain on EMS by increasing drive times to facilities.⁶² The Texas Department of Transportation Safety Division through the Texas A&M Engineering Extension Service provides funding for Texas Rural/Frontier EMS training; however, funds are limited.⁶¹

Telehealth and Telemedicine

The current coronavirus pandemic has resulted in the rapid expansion of telehealth and telemedicine services. The Centers for Medicare and Medicaid Services has expanded the number of services eligible for telehealth.⁶³ Additionally, Governor Abbott issued emergency rules expanding telehealth and telemedicine.⁶⁴ A Texas A&M University report identified telemedicine as a way for rural residents to access subspecialist services and for expanding services offered by nurse practitioners and physician assistants.⁶⁵ Broadband access is a barrier to receiving telehealth and telemedicine in rural areas of Texas.⁶¹ There are over 2 million households in Texas without high-speed internet access.⁶⁶ Fiber infrastructure and broadband access have been identified as a key concern among rural residents.⁶¹

Challenges for Older Adults in Rural Areas

Nationally, the rural population is older than the urban population.⁵³ In 2015, the median age was 51 years in rural areas and 45 in urban areas. Rural communities also had a higher proportion of people aged 65 and older in 2016, as this age group comprised 18.4 percent of the population in rural areas compared to 14.5 percent in urban areas. According to the Texas Demographic Center, rural counties experienced the greatest increases in median age from 2010 to 2018.⁶⁷ For instance, 18 percent of rural counties saw an age increase of two to four years, and 16 percent saw an increase of more than four years. Metro counties saw an age increase of two to four years in 13 percent of counties and more than four years in only 2 percent of counties. Older adults are at higher risk of chronic disease, and many manage two or more chronic conditions.⁶⁸ Because of this, older adults often require more complex health care that may be more difficult to receive in rural areas.

Challenges for Low-Income and Uninsured Populations in Rural Areas

In 2018, Texas had the highest number of uninsured people in any state.⁶⁹ Rural households also report a lower median income than urban households.⁵³ In 2016, the median income was \$46,000 for rural households and \$62,000 for urban

households. Moreover, the poverty rate was 16.9 percent in rural areas and 13.6 percent in urban areas. In 2013, the food insecurity rate was 15.8 percent in rural communities and 14.5 percent in urban communities. Low-income communities have limited access to fresh foods and built environments that are not conducive to physical activity.⁷⁰ Income and poverty have been established as being associated with health and mortality.

In summation, people that live in rural areas tend to have poorer health outcomes when compared to their urban counterparts. These issues are highlighted by the lower incomes and lower insurance rates in rural areas. These issues make rural health complex and highlight why the issues surrounding facilities and providers, as discussed below, are particularly important.

Hospital Closures and Nursing Facilities

Access to quality health services was identified as the top priority in rural health over the last decade.⁵⁷ Types of access that were identified as the most concerning include emergency services, primary care, and insurance. Since 2010, 26 rural hospitals have closed in Texas.⁷¹ Hospital closures in rural areas negatively impact access to care and potentially health outcomes as well.⁷² Hospital closures lead to loss of access to emergency care, making emergency medical transport even more important. For patients that rely on hospitals for specialty care or referrals, they lose that access as well. In particular, communities often lose access to obstetric care, mental health care, and diagnostic testing when hospitals close. Communities that lose hospitals have a difficult time recruiting employers and industries to the area.

Hospital closures can lead to increases in the amount of time patients must travel.⁷³ Longer travel times can lead to negative health outcomes, especially for conditions like traumatic injuries and stroke.

There was a significant amount of nursing home closures between June 2015 and June 2019.⁷⁴ According to a Leading Age report, there were 555 nursing home closures nationwide during these years, including 65 in Texas. Moreover, 40 percent of the nursing home closures in Texas were in rural areas.

In 2018, Texas had the highest number of uninsured people in any state, and Texas has not expanded Medicaid through the Affordable Care Act (ACA).^{69,75} Medicaid expansion and the ACA resulted in an increase in the number of insured people and, therefore, a decrease in the amount that is provided by the federal government for

uncompensated care.⁷⁶ People of color are more likely to be low-income and uninsured, so Medicaid expansion affects them more significantly.⁷⁷ Additionally, the ACA expansion of Medicaid has been found to be associated with reduced probabilities of hospital closures.⁷⁸ In particular, rural hospitals saw “significantly improved total, operating, and Medicaid and uncompensated care margins related to the ACA’s Medicaid expansion.”

Providers

Data from the Health Professions Resource Center at the Texas Department of State Health Services indicate that there was a 41.9 percent difference between the number of primary care physicians in metropolitan and non-metropolitan Texas counties in 2019. The difference of all direct patient care physicians between metropolitan and non-metropolitan counties was 77.8 percent. In 2019, there were 32 counties in Texas with no primary care physicians and 28 counties with no direct patient care physicians.

Health care clinics may close due to physician retirement or because they, like hospitals, are not financially solvent. Clinic closures in rural Texas can lead to longer drives to access care and delaying care due to the distance.⁷⁹ A Texas Observer article highlights this by describing how since the clinic in Cottle County closed, one resident must drive 30 minutes to Childress County, the next closest clinic. Residents in rural areas must make hard choices about whether or not to move to obtain better access to care, especially as they age.

Older Providers

As illustrated by data from the Health Professions Resource Center, direct patient care physicians in rural Texas areas tend to be older. In 2019, the average age of direct patient care physicians was 50.7 years in metropolitan counties and 55.3 years in non-metropolitan counties.

As physicians in rural areas age and retire, they may leave practices that have to close because there are no physicians in the area to continue the practice.⁸⁰ When the nurse practitioner who ran the only health clinic in Memphis, Texas retired, the clinic closed. Now residents must drive approximately 140 miles to receive care.

Obstetric Services

According to Health Professions Resource Center data, there was an 81.4 percent difference between the number of obstetricians and gynecologists in metropolitan

and non-metropolitan Texas counties in 2019. Projections show that the shortage of obstetricians and gynecologists is projected to continue through 2032 in seven of the eight public health regions in Texas.⁸¹

Nationally, the number of hospitals providing obstetric care in rural areas has decreased over the last 20 years.⁸² This can lead to increased travel time for women in rural areas. A study that examined factors associated with rural obstetric unit closures found that common risk factors included: low number of births, private hospital ownership, low number of family physicians in county, and lower income county.

As obstetric units close, women must drive farther distances to give birth.⁸² This may be dangerous for women with high-risk pregnancies or complications. Obstetric unit closures in rural counties that are not adjacent to urban counties are associated with higher rates of preterm births.⁸³

6. Statewide and Regional Health Workforce Projections

The Texas Department of State Health Services contracted IHS Markit to produce dental supply and demand projections from 2018 through 2030 and physician supply and demand projections from 2018 through 2032. These projections are based on the Health Workforce Model created by IHS Markit. The model includes two parts: the Health Workforce Supply Model (HWSM) and the Healthcare Demand Microsimulation Model (HDMM). The HWSM generates the supply projections and the HDMM generates the demand projections. Both models use a microsimulation approach for which the unit of analysis is the individual: in this case, providers for the HWSM and patients for the HDMM. The HWSM reports supply data as a count of the number of FTEs available to provide patient care. The HDMM models demand for health care services and providers.

This section includes the summarized statewide and regional results from supply and demand projections for primary care physicians, all dentists, general dentists, dental hygienists, and psychiatrists. Primary care physicians include physicians indicating a specialty in family medicine or practice, general practice, geriatrics, internal medicine, obstetrics and/or gynecology, or pediatrics. General dentists include dentists indicating a specialty in general, pediatric, or public health dentistry.

Primary Care Physicians

Statewide

In Texas, demand for primary care physicians is projected to exceed supply every year between 2018 and 2032. The supply of primary care physicians is projected to grow by 27.0 percent while demand is projected to grow by 33.2 percent, increasing the shortage of primary care physicians by 59.7 percent from 4,661 FTEs in 2018 to 7,442 FTEs in 2032.ⁱ

ⁱ Calculations in this section are based on unrounded FTE numbers.

Regional

Regionally, demand is projected to exceed supply for primary care physicians every year between 2018 and 2032 in all of Texas' eight public health regions. Results by region are listed below.

In the Panhandle region, supply is projected to grow by 40.9 percent while demand is projected to grow by 15.3 percent, decreasing the shortage of primary care physicians from 215 FTEs in 2018 to 111 FTEs in 2032. The shortage of primary care physicians in the North Texas region is projected to increase by 126.3 percent from 1,060 FTEs in 2018 to 2,398 FTEs in 2032.

The shortage of primary care physicians in the East Texas region is projected to decrease by 17.2 percent from 384 FTEs in 2018 to 318 FTEs in 2032. In the Gulf Coast region, supply is projected to grow by 34.7 percent while demand is projected to grow by 40.6 percent, increasing the shortage of primary care physicians from 1,282 FTEs in 2018 to 2,115 FTEs in 2032.

In the Central Texas region, the shortage of primary care physicians is projected to increase by 80.5 percent from 209 FTEs in 2018 to 377 FTEs in 2032. In the South Texas region, supply is projected to grow by 23.3 percent while demand is projected to grow by 32.7 percent, increasing the shortage of primary care physicians from 411 FTEs in 2018 to 744 FTEs in 2032.

The shortage of primary care physicians in the West Texas region is projected to increase by 4.5 percent from 394 FTEs in 2018 to 412 FTEs in 2032. In the Rio Grande Valley region from 2018 to 2032, the supply of primary care physician FTEs is projected to increase by just 3.0 percent while demand is projected to increase by 15.7 percent. The shortage of primary care physicians in the Rio Grande Valley region is projected to increase by 37.0 percent from 706 FTEs in 2018 to 967 FTEs in 2032.

All Dentists

Statewide

In Texas, demand for all dentists is projected to exceed supply every year between 2018 and 2030. The supply of all dentists is projected to grow by 23.5 percent while demand is projected to grow by 20.7 percent, decreasing the shortage of all dentists by 8.4 percent from 1,354 FTEs in 2018 to 1,240 FTEs in 2030.

Regional

Regionally, demand is projected to exceed supply for all dentists every year between 2018 and 2030 in six of Texas' eight public health regions. Results by region are listed below.

In the Panhandle region, the shortage of all dentists is projected to decrease by 13.0 percent from 181 FTEs in 2018 to 157 FTEs in 2030. In the East Texas region from 2018 to 2030, the supply of all dentist FTEs is projected to increase by 19.3 percent while demand is projected to increase by just 2.2 percent. While the supply deficit is projected to decrease during these years, the East Texas region is still projected to have a shortage of 347 all dentist FTEs in 2030.

The shortage of all dentists in the Central Texas region is projected to increase by 46.4 percent from 296 FTEs in 2018 to 433 FTEs in 2030. In the South Texas region, supply and demand are projected to grow at similar rates, 20.8 percent and 21.8 percent, respectively, increasing the shortage of all dentists from 37 FTEs in 2018 to 59 FTEs in 2030.

In the West Texas region, supply is projected to grow by 22.7 percent while demand is projected to grow by 17.4 percent, increasing the shortage of all dentists from 263 FTEs in 2018 to 285 FTEs in 2030. In the Rio Grande Valley region, the shortage of all dentists is projected to decrease by 10.3 percent from 376 FTEs in 2018 to 338 FTEs in 2030.

North Texas and the Gulf Coast are the only regions where the supply of all dentists is projected to exceed demand every year between 2018 and 2030. In the North Texas region, the surplus of all dentists is projected to increase by 108.5 percent from 137 FTEs in 2018 to 285 FTEs in 2030. In the Gulf Coast region, the surplus of all dentists is projected to increase by 3.0 percent from 91 FTEs in 2018 to 94 FTEs in 2030.

General Dentists

Statewide

In Texas, demand for general dentists is projected to exceed supply every year between 2018 and 2030. The supply of general dentists is projected to grow by 23.2 percent while demand is projected to grow by 21.1 percent, decreasing the

shortage of general dentists by 2.3 percent from 1,049 FTEs in 2018 to 1,026 FTEs in 2030.

Regional

Regionally, demand is projected to exceed supply for general dentists every year between 2018 and 2030 in six of Texas' eight public health regions. Results by region are listed below.

In the Panhandle region, the shortage of general dentists is projected to decrease by 12.5 percent from 148 FTEs in 2018 to 130 FTEs in 2030. In the East Texas region from 2018 to 2030, the supply of general dentist FTEs is projected to increase by 19.6 percent while demand is projected to increase by just 2.4 percent. While the supply deficit is projected to decrease during these years, the East Texas region is still projected to have a shortage of 310 general dentist FTEs in 2030.

The shortage of general dentists in the Central Texas region is projected to increase by 51.6 percent from 250 FTEs in 2018 to 379 FTEs in 2030. In the South Texas region, supply and demand are projected to grow at similar rates, 20.9 percent and 22.1 percent, respectively, increasing the shortage of general dentists from 34 FTEs in 2018 to 57 FTEs in 2030.

In the West Texas region, supply is projected to grow by 22.6 percent while demand is projected to grow by 17.6 percent, increasing the shortage of general dentists from 239 FTEs in 2018 to 262 FTEs in 2030. In the Rio Grande Valley region, the shortage of general dentists is projected to decrease by 10.8 percent from 309 FTEs in 2018 to 276 FTEs in 2030.

North Texas and the Gulf Coast are the only regions where the supply of general dentists is projected to exceed demand every year between 2018 and 2030. In the North Texas region, the surplus of general dentists is projected to increase by 52.8 percent from 175 FTEs in 2018 to 268 FTEs in 2030. In the Gulf Coast region, the surplus of general dentists is projected to decrease by 11.1 percent from 135 FTEs in 2018 to 120 FTEs in 2030.

Dental Hygienists

Statewide

In Texas, demand for dental hygienists is projected to exceed supply every year between 2018 and 2030. The supply of dental hygienists is projected to grow by 17.4 percent while demand is projected to grow by 18.6 percent, increasing the shortage of dental hygienists by 28.4 percent from 1,638 FTEs in 2018 to 2,103 FTEs in 2030.

Regional

Regionally, demand is projected to exceed supply for dental hygienists every year between 2018 and 2030 in six of Texas' eight public health regions. Results by region are listed below.

In the North Texas region, the shortage of dental hygienists is projected to increase by 51.1 percent from 254 FTEs in 2018 to 384 FTEs in 2030. In the Gulf Coast region, supply is projected to grow by 15.6 percent while demand is projected to grow by 23.7 percent, increasing the shortage of dental hygienists from 624 FTEs in 2018 to 1,033 FTEs in 2030.

The shortage of dental hygienists in the Central Texas region is projected to increase by 116.4 percent from 110 FTEs in 2018 to 238 FTEs in 2030. In the South Texas region, supply is projected to grow by 18.4 percent while demand is projected to grow by 21.0 percent, increasing the shortage of dental hygienists from 77 FTEs in 2018 to 129 FTEs in 2030.

In the West Texas region, the shortage of dental hygienists is projected to increase by 9.7 percent from 152 FTEs in 2018 to 167 FTEs in 2030. In the Rio Grande Valley region from 2018 to 2030, the supply of dental hygienist FTEs is projected to increase by 23.1 percent while demand is projected to increase by 6.9 percent. While the supply deficit is projected to decrease during these years, the Rio Grande Valley region is still projected to have a shortage of 248 dental hygienist FTEs in 2030.

East Texas is the only region where the shortage of dental hygienists is projected to improve to a surplus by 2030. It is projected that the shortage of 94 dental hygienist FTEs in 2018 will improve to a surplus of 17 FTEs in 2030. The Panhandle is the only region where the supply of dental hygienists is projected to exceed

demand every year between 2018 and 2030. The surplus of dental hygienists in the Panhandle region is projected to increase from 4 FTEs in 2018 to 79 FTEs in 2030.

Psychiatrists

Statewide

In Texas, demand for psychiatrists is projected to exceed supply every year between 2018 and 2032. The supply of psychiatrists is projected to grow by 29.5 percent while demand is projected to grow by 19.4 percent, decreasing the shortage of psychiatrists by 1.7 percent from 1,061 FTEs in 2018 to 1,043 FTEs in 2032.

Regional

Regionally, demand is projected to exceed supply for psychiatrists every year between 2018 and 2032 in seven of Texas' eight public health regions. Results by region are listed below.

In the Panhandle region from 2018 to 2032, the supply of psychiatrist FTEs is projected to increase by 46.1 percent while demand is projected to increase by just 3.8 percent. While the supply deficit is projected to decrease during these years, the Panhandle region is still projected to have a shortage of 50 psychiatrist FTEs in 2032. The shortage of psychiatrists in the North Texas region is projected to increase by 6.3 percent from 375 FTEs in 2018 to 399 FTEs in 2032.

East Texas is the only region where demand for psychiatrists is projected to decrease from 2018 to 2032. While demand is projected to decrease during these years, the East Texas region is still projected to have a shortage of 76 psychiatrist FTEs in 2032. In the Gulf Coast region, supply is projected to grow by 31.3 percent while demand is projected to grow by 24.7 percent, increasing the shortage of psychiatrists from 229 FTEs in 2018 to 242 FTEs in 2032.

The shortage of psychiatrists in the South Texas region is projected to increase by 59.3 percent from 70 FTEs in 2018 to 112 FTEs in 2032. In the West Texas region, supply is projected to grow by 43.5 percent while demand is projected to grow by 18.9 percent, decreasing the shortage of psychiatrists from 69 FTEs in 2018 to 65 FTEs in 2032. The shortage of psychiatrists in the Rio Grande Valley region is projected to increase by 4.3 percent from 126 FTEs in 2018 to 132 FTEs in 2032.

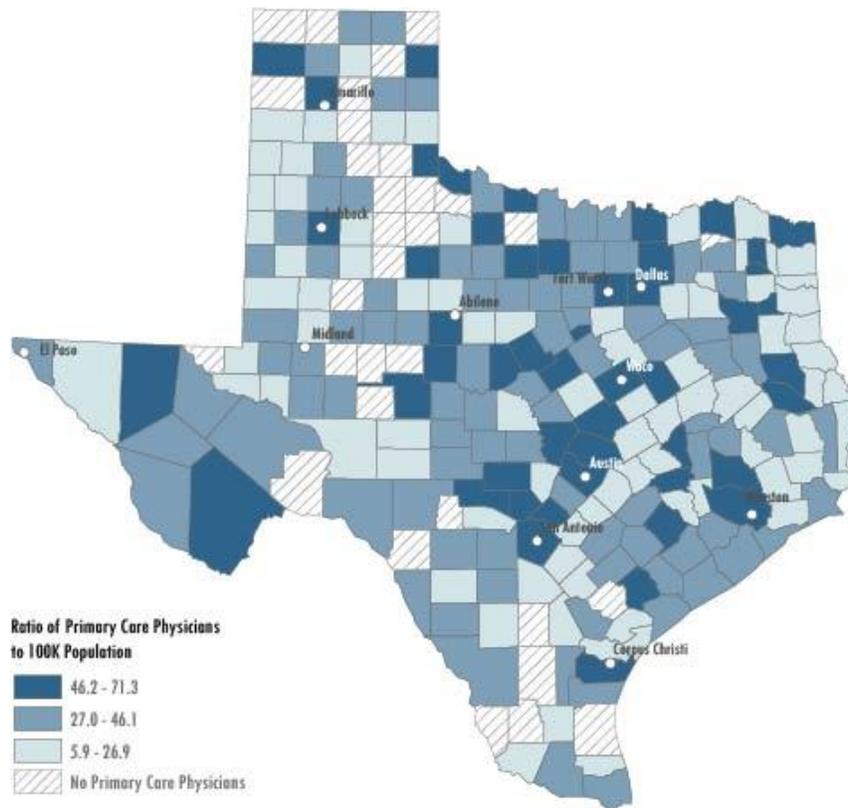
Central Texas is the only region where the shortage of psychiatrists is projected to improve to a surplus by 2032. In the Central Texas region, supply is projected to grow by 45.1 percent while demand is projected to grow by 24.5 percent, leading to the shortage of 36 psychiatrist FTEs in 2018 improving to a surplus of 32 FTEs in 2032.

7. Primary Care Programs and Resources

Primary Care in Texas

Primary care is important to overall health.⁸⁴ Primary care providers offer a consistent source of care, early disease detection, and chronic disease management. Primary care includes the following specialties: family medicine or practice, general practice, geriatrics, internal medicine, obstetrics and/or gynecology, and pediatrics. Additionally, primary care is associated with better health outcomes. According to data from the Health Professions Resource Center at the Texas Department of State Health Services, there were 22,124 primary care physicians in 2019, which was a 14.8 percent increase from 2014. In 2019, there were 32 counties in Texas with no primary care physicians. The figure below shows the distribution of primary care physicians across Texas in 2019.

Figure 19. Primary Care Physicians, Texas, 2019



Source: Texas Department of State Health Services, Health Professions Resource Center, 2019.

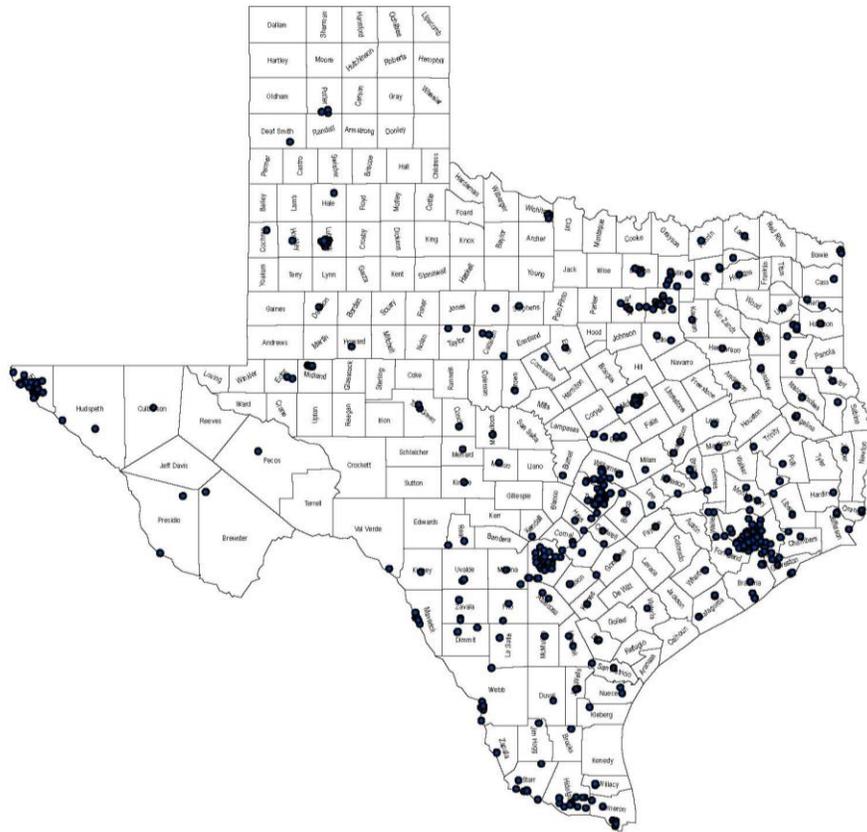
Community Health Centers

There are a number of community health centers (CHCs) that provide affordable, high-quality care in Texas. CHCs provide critical services in Texas, including chronic condition management, preventative services, dental services, and behavioral health services.⁸⁵ In 2018, CHCs served 503,601 children, 78,010 homeless individuals, and 13,159 veterans. Those served were largely low-income, with 65 percent at or below 100 percent poverty and 91 percent at or below 200 percent poverty, and 76 percent were of a racial/ethnic minority group. Additionally, 41 percent of patients were uninsured, and 28 percent were insured through Medicaid.

CHCs are FQHCs, though not all FQHCs are CHCs; additionally, there are FQHC look-alikes. There were 72 FQHCs and one FQHC look-alike in Texas as of November 2020.⁸⁶ These health centers cover 133 of 254 counties. FQHCs and look-alikes receive access to:

- FQHC Prospective Payment System reimbursement for services to Medicare and Medicaid beneficiaries;
- 340B Drug Pricing Program discounts for pharmaceutical products;
- Free vaccines for uninsured and underinsured children through the Vaccines for Children Program; and
- Assistance in the recruitment and retention of primary care providers through the NHSC.⁸⁷

Figure 20. FQHCs, Texas, November 2020

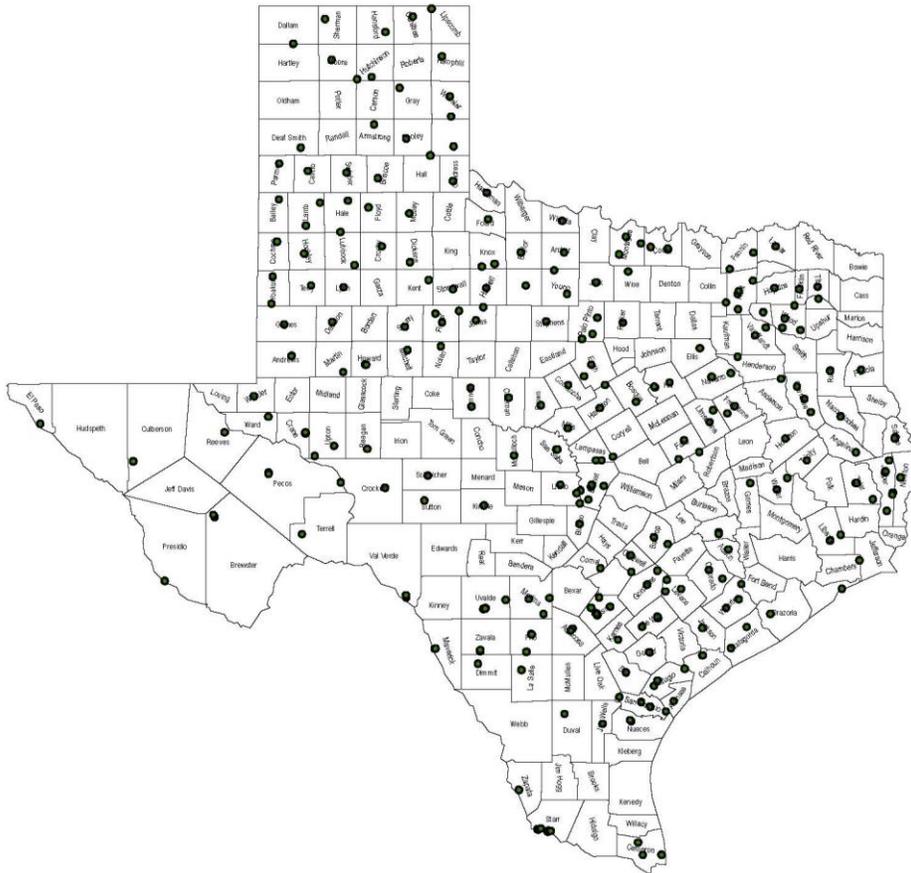


Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, November 2020.

Rural Health Clinics

RHCs must be in a non-urban area, as defined by the U.S. Census Bureau, and in a HPSA or MUA that has been designated by the Health Resources and Services Administration within the last four years.⁸⁸ RHCs are required to have a team that includes non-physician providers such as nurse practitioners and physician assistants. RHCs are also required to provide outpatient primary care services and certain laboratory services on-site. As of January 2021, there were 309 RHCs in Texas.⁸⁹

Figure 21. RHCs, Texas, November 2020



Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, November 2020.

Critical Access Hospitals

Critical access hospital is a designation for rural hospitals that meet the following requirements:

- Have 25 or fewer acute care inpatient beds;
- Be farther than 35 miles from another hospital;
- Have an annual average stay length of 96 hours or less for acute care patients; and
- Provide emergency services 24 hours per day, seven days per week.⁹⁰

The critical access hospital designation was created to improve access to health services and reduce the financial vulnerability of rural hospitals.⁹⁰ This designation provides benefits, including cost-based reimbursement from Medicare, flexible services and staffing, and access to the Flex Program's educational resources, technical assistance, and grants. As of July 2020, Texas had 87 critical access hospitals.⁹¹

Conrad 30 J-1 Visa Waiver Program

The Texas PCO at the Texas Department of State Health Services administers the Texas Conrad 30 J-1 Visa Waiver and National Interest Waiver programs. The Conrad 30 J-1 Visa Waiver program allows up to 30 physicians to be recommended by the state to work in designated underserved areas and, in doing so, have the home residency requirement waived.⁹² A National Interest Waiver is similar and allows for physicians that work in a designated underserved area for five years (in most cases) to be eligible to apply for a green card.⁹³ Physicians must obtain a statement from a federal agency or a state department of health that has knowledge of their qualifications as a physician and that states their work is in the public interest. This statement is known as an attestation.

Texas remains a popular state in which to do the Conrad 30 J-1 Visa Waiver program.⁸⁹ Prior to 2018, the program recommended applications on a first-come, first-serve basis. In 2018, Texas moved to a prioritization system. The priority window is the first two weeks of September. Applications must meet state and federal requirements, and there is also a \$3,000 fee required by the state.⁹² All applications received in this window are considered and ranked based on physician specialty and underserved area designation. Primarily, primary care physicians (internal medicine, family practice or medicine, general practice, pediatrics, obstetrics and/or gynecology, and geriatrics) and mental health specialists are highest priority. For more information on prioritization, see the Texas Conrad 30 J-1 Visa Waiver program website: www.dshs.texas.gov/chpr/j1info.shtm. After verifying and processing the applications, the Texas PCO forwards the applications to the U.S. Department of State. Texas has recommended 578 physicians through the Conrad 30 J-1 Visa Waiver program since 2002 and issued over 400 National Interest Waiver letters since 2000.⁸⁹

National Health Service Corps

The NHSC works to increase access to primary care by supporting eligible provider types in high needs areas.⁹⁴ There are a number of NHSC programs, including the scholarship program and multiple loan repayment programs, that provide services at pre-approved NHSC sites in primary care, dental, and/or mental health HPSAs.

NHSC Scholarship Program⁹⁵: Students receive full tuition, educational expenses, and a monthly living stipend to pay for their professional school (graduate level). In exchange, recipients work for two to four years at a high-needs NHSC approved facility. If recipients have outstanding student loans after they complete their scholarship, they can transition into the Loan Repayment Program and will not have to compete with new loan repayment program applicants.

Students to Service Loan Repayment Program⁹⁶: Certain students in their last year of training receive loan repayment assistance for four years. In return, recipients work for three years at an approved NHSC site with a HPSA score of 14 or above. If recipients have outstanding student loans after they complete their scholarship, they can transition into the Loan Repayment Program and will not have to compete with new loan repayment program applicants.

Loan Repayment Program⁹⁷: After training, providers in certain disciplines and specialties can apply for student loan repayment assistance in return for working at an approved NHSC site. There is an initial two-year service obligation that can be renewed annually with continued eligible service. With continued eligible service, providers can renew for however many years it takes to repay their student loans.

Substance Use Disorder Workforce Loan Repayment Program⁹⁸: Providers in certain disciplines and specialties who provide substance use disorder services at approved NHSC substance use disorder sites can apply for student loan repayment assistance. It is a three-year service obligation.

Rural Community Loan Repayment Program⁹⁹: Providers in certain disciplines and specialties who are working to combat the opioid epidemic at approved NHSC substance use disorder sites located in a rural area can apply for student loan repayment assistance.¹⁰⁰ It is a three-year service obligation.

There are 673 NHSC sites in Texas.¹⁰¹ The types are listed in the table below.

Table 2. Number of NHSC Sites by Type, Texas

Site Type	Count
Critical Access Hospital	9
Certified RHC	42
FQHC	495
FQHC Look-Alike	2
Local Mental or Behavioral Health Authority	60
Substance Use Disorder Facility	2
Private Clinic	21
Public Health Clinic	11
Indian Health Service or Tribal Clinic	5
Federal Bureau of Prisons	5
Immigration and Customs Enforcement Medical Facility	5
State Prison	13
COVID-19 Temporary Sites	3
Total NHSC Sites	673

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse.

There are currently 327 providers in NHSC programs in Texas.¹⁰² There are a total of 47 physicians, 25 of which are primary care physicians. There are 27 physician assistants, 78 nurse practitioners, 4 certified nurse midwives, 41 dentists, 13 dental hygienists, 3 psychiatrists, 50 licensed professional counselors, 17 licensed clinical

social workers, 5 health service psychologists, 1 marriage and family therapist, 3 mental health physician assistants, 27 mental health nurse practitioners, 9 substance use disorder counselors, and 2 pharmacists.

Nurse Corps

Nurse Corps helps to build healthier communities in urban, rural, and frontier areas by supporting nurses and nursing students committed to working in communities with inadequate access to care at a critical shortage facility (CSF) located in a primary care or mental health HPSA.

In the Nurse Corps Scholarship Program, students in accredited nursing programs receive tuition, fees, and other educational costs.¹⁰³ In return, recipients work at a CSF with a HPSA score of 14 or above.

In the Nurse Corps Loan Repayment Program, eligible nurses and nurse faculty receive financial assistance to repay a portion of their qualifying educational loans in exchange for full-time service either at a CSF or an eligible school of nursing.¹⁰⁴

There are currently 16 registered nurses and 25 advance practice nurses providing services at CSFs through the Nurse Corps programs in Texas.¹⁰⁵

Joint Admission Medical Program

The Joint Admission Medical Program is funded through the Texas Higher Education Coordinating Board and is administered by the Joint Admission Medical Program Council.^{106,107} This program provides services to support and encourage highly qualified, economically disadvantaged students pursuing a medical education.¹⁰⁷ Participating students receive:

- Undergraduate and graduate scholarships;
- Summer stipends;
- Placement into internship programs;
- Placement into any required undergraduate mentoring program; and
- Guaranteed admission to at least one participating medical school.^{107,108}

Students must meet eligibility requirements in order to be admitted into the Joint Admission Medical Program and to continue participation in the program.^{109,110} Currently, 11 Texas medical schools and 70 public and private four-year undergraduate institutions participate in the program.¹⁰⁶

Physician Education Loan Repayment Program

The Texas Higher Education Coordinating Board administers the Physician Education Loan Repayment Program.¹¹¹ This program provides loan repayment funds up to \$180,000 over a period of four years to qualifying physicians.¹¹² To be eligible to receive loan repayment assistance, a physician must have completed one, two, three, or four consecutive service periods in a:

- HPSA serving persons who are (1) enrolled in Medicaid and/or the Texas Children’s Health Insurance Program, (2) uninsured, and (3) enrolled in Medicare, except in the case of pediatricians;
- Secure correctional facility operated by or under contract with the Texas Juvenile Justice Department;
- Secure correctional facility operated by or under contract with any division of the Texas Department of Criminal Justice; or
- Location other than a HPSA if the physician practices primary (outpatient) care and during the service period has provided health care services to a designated number of Medicaid or Texas Women's Health Program enrollees.¹¹³

Physicians who qualify based on practicing in a HPSA must agree to provide four consecutive service periods in a HPSA.¹¹³ Priority is given to primary care physicians practicing in HPSAs.¹¹⁴ Primary care physicians include physicians practicing family medicine, family practice, general practice, obstetrics/gynecology, general internal medicine, general pediatrics, combined internal medicine and pediatrics (medicine-pediatrics) in an outpatient setting, psychiatry, or geriatrics.¹¹⁵ With the exception of psychiatrists and geriatricians, physicians must provide services in an outpatient setting to be considered primary care.

Loan Repayment Program for Mental Health Professionals

The Texas Higher Education Coordinating Board administers the Loan Repayment Program for Mental Health Professionals.¹¹⁶ This program was created to encourage qualified mental health professionals to practice in a mental health HPSA and provide mental health care services to recipients under the medical assistance program authorized by the Texas Human Resources Code, Chapter 32, and to enrollees under the child health plan program authorized by the Texas Health and Safety Code, Chapter 62. To be eligible to receive annual loan repayment assistance, a mental health professional must agree to provide five consecutive years of eligible service in a mental health HPSA. Mental health professionals must also agree to provide mental health services to:

- Individuals enrolled in Medicaid and/or the Texas Children’s Health Insurance Program;
- Persons committed to a secure correctional facility operated by or under contract with the Texas Juvenile Justice Department; or
- Persons confined in a secure correctional facility operated by or under contract with any division of the Texas Department of Criminal Justice.¹¹⁷

Eligible disciplines for this program are psychiatrists, psychologists, advanced practice registered nurses who are board certified in psychiatric or mental health nursing, licensed professional counselors, licensed clinical social workers, licensed marriage and family therapists, and licensed chemical dependency counselors who have received an associate’s degree related to chemical dependency counseling or behavioral science.¹¹⁸ The amount of assistance is dependent on the provider’s discipline.¹¹⁹ Eligible mental health professionals may also receive matching federal funds through the NHSC State Loan Repayment Program.¹²⁰

List of Acronyms

Acronym	Full Name
ACA	Affordable Care Act
BMI	Body Mass Index
BRFSS	Behavioral Risk Factor Surveillance System
CHC	Community Health Center
CSF	Critical Shortage Facility
EMS	Emergency Medical Services
FQHC	Federally Qualified Health Center
FTE	Full-Time Equivalent
HDMM	Healthcare Demand Microsimulation Model
HPSA	Health Professional Shortage Area
HWSM	Health Workforce Supply Model
MUA	Medically Underserved Area
MUP	Medically Underserved Population
NHSC	National Health Service Corps
PCO	Primary Care Office

Acronym**Full Name**

RHC

Rural Health Clinic

YRBS

Youth Risk Behavior Survey

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